Form 3060-1

(July 1984)

United States
Department of the Interior
Bureau of Land Management

Serial Number

CACA 31729

Mineral Report

VALID EXISTING RIGHTS DETERMINATION
OF LODE MINING CLAIMS
IN THE BODIE BOWL,
PARTIALLY FULFILLING REQUIREMENTS OF THE
BODIE PROTECTION ACT OF 1994

Lands Involved

Portions of
T. 4 N., R. 26 & 27 E.
Containing about 7,658 Acres

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Dec. 11, 1997
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* U.S. Government Printing Office: 1984-776-009/4879 R8

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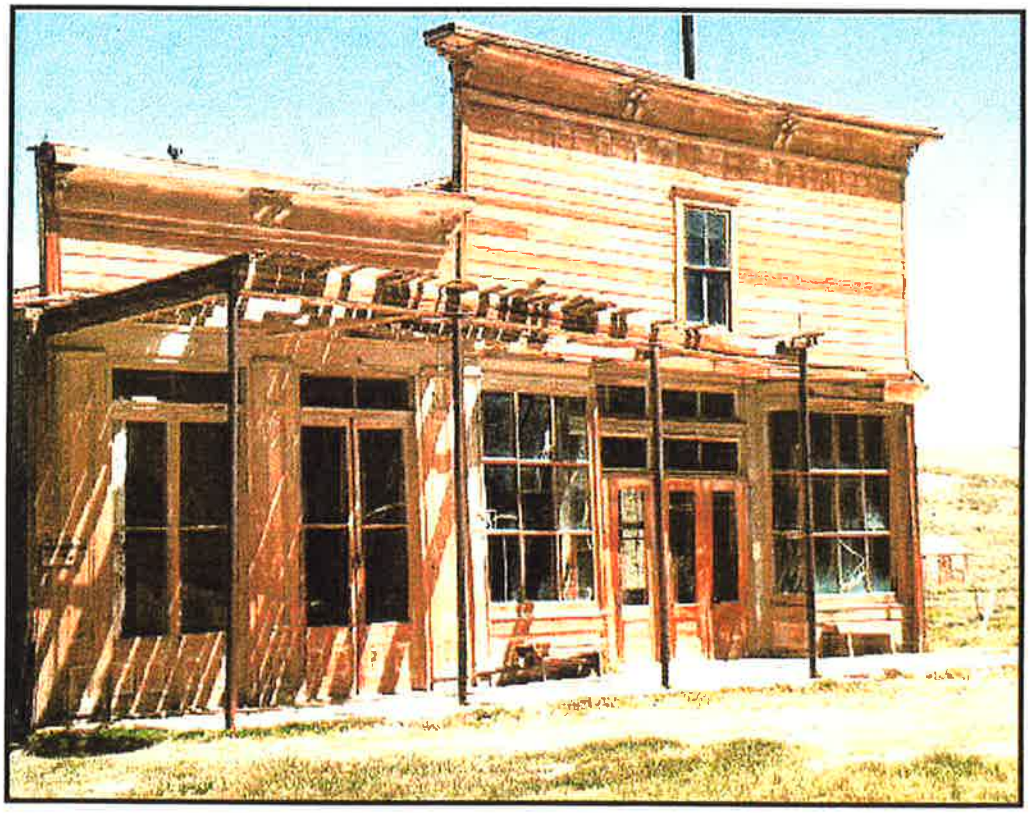
Part 1

General Information

SUMMARY

The Bureau of Land Management was directed in the Bodie Protection Act of 1994 (PL 103-433) to conduct a valid existing rights determination of the 361 unpatented mining claims within the Bodie Bowl. This report presents our investigation of the verification of valid existing rights for 332 lode mining claims, 27 placer claims and 2 mill site claims within this congressionally-defined mineral withdrawal (see **Map 6** and **Figures 1 and 2**). The Bodie mining district, as established on July 10, 1860 (see **Appendix 8**), encompassed 100 square miles, and was centered at Wakeman S. Bodey's mining claim, probably located near Gray's mill at the junction of Bodie Creek and Taylor Gulch. However, from some of the earliest published reports until present, the district mainly encompasses a linear range of hills which extends from Queen Bee Hill on the south



General Land Office at Bodie. From this building early mining and agricultural patents were issued between 1885 and 1886.

to Bodie Bluff on the north (for location, see **Figure 2**). The surface expression of hydrothermal alteration and past mineral development closely follows the topographic break on the western slope of the hills. On the north end at Bodie Bluff the alteration is about one mile wide, but tapers nearly to a point just south of Sugarloaf. While alteration encompasses Sugarloaf, no formerly productive mines are known to have been developed there. Queen Bee Hill, the next hill north of Sugarloaf is the southern limit of economic gold development, and the southern limit of the mining district.

Our investigation confirms earlier studies of the Bodie mining district which indicate that all formerly economic gold and silver mines lie within a zone of wall rock alteration (Al-Rawi, 1969).

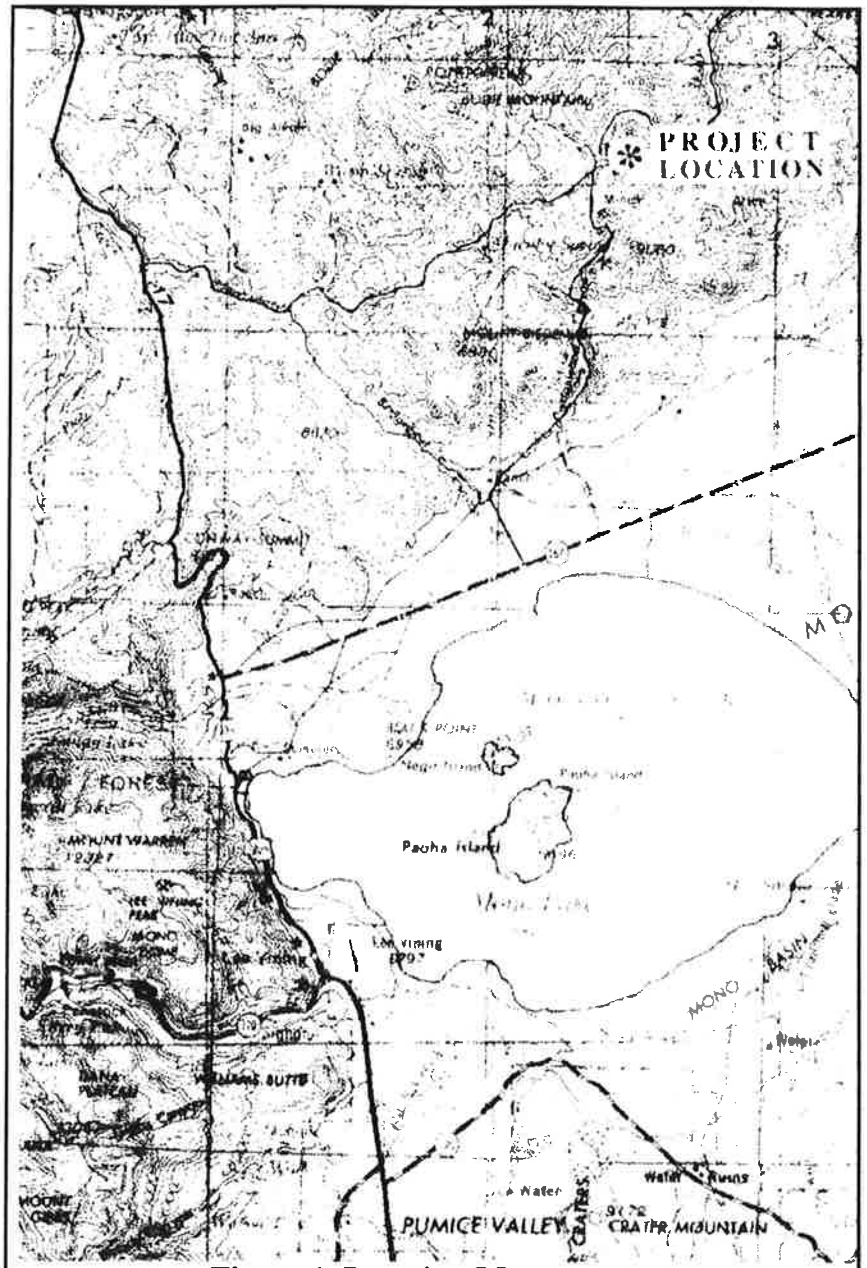


Figure 1. Location Map

Within the study area ("Bodie Bowl"), there are 211 lode mining claims which are outside this alteration zone. We examined each of these claims in the field and found no evidence of historical development on any of them, although there are scattered exploratory workings. Our search of historic mining records indicate that mineral *development* had never occurred on any of these 211 lode claims. Based on geologic models of mineralization in the Bodie mining district, we found no outcrops of rock or vein material within the boundaries of these 211 claims that were worthy of being sampled. However, we did have assay results from a previous U.S. Bureau of Mines

study of prospecting areas in and around the Bodie Bowl (1992). These assay results are consistent with our findings: claims outside the alteration zone do not have any mineral value. Based on our physical examination of each of these mining claims, we did not find or observe any surface or subsurface physical evidence, or mineral improvement (such as pits, trenches, drill hole information) which expose valuable mineral deposits within the limits of the mining claims.

For the 121 lode claims inside the zone of alteration, economic mineralization is controlled by the presence, width and occurrence frequency of quartz veins. Where high-grade quartz veinlets are dense enough, low grade deposits form and could be produced through bulk mining techniques. There are a few pillars of wide quartz veins still present in underground workings. We could not confirm that these ore bodies could be developed through underground mining. Some high-grade ore bodies were identified by drilling, all of them lie within the zone of bulk-minable mineralization.

We examined 27 placer claims. The placers are of three types: modern stream placers, residual gold placers from historic ground sluicing, and ancient, buried placers.

The gold-bearing gravels and tailings exist on the following claims:

Tailings:	BCP #19, 18, 17, 11, 10, 9, 8, 7,
Gravel "C"	BCP #17, 16, 12, 11, 10, 9, 8
Gravel "E"	BCP #17, 16, 15, 11, 10, 9, 8, 7

Our testing found visible gold in most of the placer samples we collected. In two samples the gold content exceeded $4.00 per cubic yard of gravel. The volume of these gravels is too low, and the amount of overburden covering them to thick to meet requirements of discovery. We were not able to verify the presence of economically producible gold placer deposits on any of the placer claims in the Bodie Bowl.

There are two unpatented mill site claims in the Bodie Bowl. During this examination, we found one of these claims to be used to stockpile ore for future milling operations. On the Margie Mill Site there is a "stockpile" of volcanic rocks without any visible mineralization. The assay of a composite sample from the surface of the Margie dump yielded no detectable gold. Five samples from the Parker-Whitney Mill Site stockpiles had assays ranging from 0.1 to 0.023 oz Au/ton. All these assays are above cut-off grade for this project. A mill site is valid if used as a stockpile for ore-grade material.

We found some claims to be valid which are adverse to prior locations. These include the Amarillo which conflicts with the Zeus 80, and the Arthur #2 which conflicts with the Transit. These claims, which would have been valid had they not been superseded by previous locations are summarized in the following table.

CLAIM WITH DEFINED MINERALIZATION BUT ENCUMBERED BY PRIOR EXISTING RIGHTS					
Claim Name	**CAMC Claim Number**	**Date of Location**	**Conflicting Senior Claims**	**CAMC Claim Number**	**Date of location**
Amarillo	240744	11-01-1990	Texas	039090	07-02-1927
Amarillo	240744	11-01-1990	Zeus 80	039103	04-04-1968
Zeus 127	039126	03-13-1968	Patented Land (Hobart, Sitting Bull, Central Lode)		
Zeus 133	039130	03-13-1968	Patented Land (Whitney, Tioga)		
Zeus 99	039119	04-05-1968	Patented Land (Whitney)		
Arthur #2	240743	11-01-1990	Transit	039099	10-27-1897

CONCLUSIONS

Three hundred and thirty-two lode mining claims, 27 placers and 2 mill sites were identified within the Bodie Bowl from BLM mining claim recordation documents and verified by field observations. Of these, 121 lode claims were found to lie within the zone of wall rock alteration and historic mine development. There are 211 lode claims outside this zone. We found none of the placers to be supported by a discovery of a valuable mineral deposit. The one unpatented mill site claim being used for the purpose of stockpiling ore is valid. We found five unpatented lode mining claims that meet the requirements of discovery in the Bodie Bowl. They are listed in the table on page 7.

We identified a discovery on the Zeus 90, Zeus 127 and Zeus 133 claims, but these discovery were made on private lands portions of the claim, not on Federal lands. These claims are invalid because the location of the claims post-dates patenting of the private land and we could find no discovery site on the portions of the claims that are on Federal land.

The Parker-Whitney Mill Site is valid because it is being used and occupied with a stockpile of ore-grade materials. The Margie Mill Site is not valid because, on dates of examination, it was not being used or occupied in good faith for mining or other related purposes.

We found the claims listed in the **Summary Table** on page 7 to be valid. For the other unpatented claims which evaluated, we found no historical or physical information that would engender a belief that those mining claims listed are supported by a discovery of a valuable mineral deposit. In **Appendix 1**, the all the claims we evaluated are identified by serial number, and owner. For those claims not highlighted in **Appendix I**, a prudent person would NOT be justified in further expenditure of their labor or means toward development of a valuable mine on these lode and placer claim as of October 31, 1994.

RECOMMENDATIONS

We recommend that the California State Office, Bureau of Land Management initiate contest action by issuing a complaint to the claimants of record for those mining claims identified in **Appendix 1** which are not supported by a discovery of a valuable mineral deposit, which have not been relinquished, or which have not been abandoned as of date of this report.

The complaint shall charge that:

Minerals have not been found within the limits of the claims in sufficient quantities and or qualities to constitute a discovery of a valuable mineral deposit [Castle v. Womble, 19 L.D. 455 (1894)].

Discovery Sites and Valid Claims in the Bodie Bowl							
Claim Name	**Claim Number (CAMC-)**	**Ave. Grade**	**Gross Ore (tons)**	**Gross Waste (tons)**	**Ounce Gold**	**Ore : Waste Ratio**	**Discovery Site and Description**
Belvedere	039094	0.022	2,244,484	3,853,356	49,378	1 : 1.71	Drill Hole BGR 89-161, from 120 to 125 ft.; 0.146 oz Au/ton.
Blue Point	039210	0.038	195,575	181,030	7,432	1 : 093	Drill Hold BGR 88-092, from 105 to 110 ft.; 0.047 oz Au/ton..
Central Pacific	039212	0.008	168,327	813,839	1,346	1 : 4.83	Drill Hold BAV-68-001, from 230 to 235 ft.; 0.203 oz Au/ton.
Georgia	039096	0.032	1,414,859	1,476,485	45,275	1 : 1.04	Drill Hole BGR 88-092, from 425 to 430 ft. 0.033 oz Au/ton.
Texas	039090	0.027	478,339	597,153	12,915	1 : 1.25	Drill Hole BGR 88-095, from 80 to 85 ft.; 0.066 oz Au/ton.
Transit	039099	.009	19,295	183,275	174	1 : 9.48	Small, irregular parcel of public land. Discovery supported by measured reserves identified in our mine model.
Total BLM lode claims			4,520,879	7,105,138	116,52		
Total Project		0.035	33,942,706	44,548,289	1,187,990	1 : 1.31	
Parker-Whitney Mill Site	039218	0.0778	24,200 cu. Yds	0	2,523	N/A	BLM Samples 93 to 97

PART 1: GENERAL INFORMATION

INTRODUCTION

A. History of Events Leading to this Examination

The exploratory drilling and sampling at Bodie, which had been going on almost continuously since the late 1960s, became controversial in the late 1980s, when Galactic Resources Limited (hereafter "Galactic") began seriously talking about mining the property (**Figure 2**). Up to the time of Galactic's acquisition of the project, exploration activities had been conducted with a minimum of involvement by State, County, or Federal regulators. This was due to the small acreage, and short-term nature of the impacts. Galactic filed mining Notices to conduct exploration activities (submitted pursuant to 43 CFR 3809) with the BLM on August 1, 1988, November 14, 1988, June 12, 1989 and April 5, 1990. The total surface disturbance of these activities was 0.53 acres of federal land, and 0.42 acres of private land. Galactic was required by Mono County to submit an application for a use permit, which they did on September 21, 1990.

Due to the controversy surrounding proposed exploratory drilling, on May 17, 1990 an Application for Director's Review was submitted by Bodie Consolidated Mining Company (BCMC) to Mono County, to obtain approval to continue mineral exploration activities on private property at Bodie.

Following this action, a comprehensive Environmental Impact Report was prepared to evaluate mineral exploration activities (Beak, 1992, p. 2-1). The company proposed to drill, trench, construct access roads, conduct surface and underground sampling and process material. Total surface disturbance was projected from between 0.5 and 5.3 acres of public land and 1.7 to 18.3 acres of private land this proposal was not approved by the Mono County Planning Department or by the BLM.

Controversy surrounding proposed mining at Bodie generated extensive media coverage. The following sampling of media headlines, and outline of events are provided only for the purpose of illustrating major media interest and attitude about the Bodie Project.

- "Is this Ghost Town Giving up the Ghost?" *Sacramento Bee*, March 26, 1989
- "Will California have to say 'Goodbye' to Bodie?" *Modesto Bee*, May 7, 1989
- "Gold Hunt Jostles Ghost Town" *San Francisco Chronicle*, June 26, 1989
- "Mining Firm Strikes Deep Vein of Concern for Historic Ghost Town" *Los Angeles Times*, June 4, 1989
- ABC "World News Tonight" - July 6, 1989.
- "Legislature Gets Involved in Historic Bodie Fight" *Sacramento Union*, April 18, 1990
- "Gold Mining May Return to Bodie" *Los Angeles Times*, April 29, 1990
- "Bodie: Quiet Ghost Stirring" *Sunset*, May 1990
- "The Miners Want Bodie" *Sacramento News & Review*, May 3, 1990
- "Stripping a State Park" (editorial) *Sacramento Bee*, May 7, 1990
- "West Comes Alive in a Ghost Town" *New York Times*, June 10, 1990
- "Bodie - the Ghost Town Frozen in time" The Discovery Channel, November 1992.

The March 26, 1989 *Sacramento Bee* article, a portion reproduced below, is one of the more extreme examples of coverage the proposed mining at Bodie generated:

> *Goodbye, Bodie. Not "Goodbye, God, we're going to Bodie," as the little girl said in her prayer.*
>
> *Just "Goodbye."*
>
> *You'd better get up there quickly. While the old Mono County ghost town and the mine-scarred hills behind it are still intact. Take plenty of pictures. Take the kids.*
>
> *It may be their last chance to see an honest-to-goodness ghost town. The last one in California. Maybe in the West. A national historic landmark. A state historic park.*
>
> *For a Canadian corporation with huge strip-mine projects in the Southern and Western United States - and exploratory projects in places as far off as China - is coming to town.*

In a May 9, 1989 letter to Interior Secretary Lujan, Congressman Richard Lehman, representative for Mono County, expressed concerns about Galactic's activities, and specifically urged:

> 1. The federal land surrounding Bodie has been designated as a National Historic Landmark, but precise boundaries have not been surveyed. The National Park Service should immediately survey the boundaries of this historic landmark.
>
> 2. Because of the proximity to a state historic park, the Bureau of Land Management should require Galactic Resources to file a plan of operations at the earliest possible date to ensure that the local, state and federal agencies may fully review the impacts of extensive gold mining in the Bodie region. Even prior to its supervision under a plan of operations, under notice provisions of federal mining regulations, BLM should supervise Galactic's activities to minimize damages to historic values and to the environment adjacent to the state park.
>
> 3. A comprehensive environmental impact statement (EIS) should be required prior to any mineral development adjacent to the Bodie State Historic Park or within the National Historic Site.

In a letter to the **Save Bodie!** committee on June 8, 1989, and reprinted in part in their newsletter, U.S. Senator Alan Cranston stated:

> I'm greatly concerned that the BLM has allowed test holes to be drilled on land that may be included in the National Historic Landmark. I've urged Secretary Lujan to ensure that the Park Service study be completed as quickly as possible and that the federal land that borders Bodie be protected.

On April 13, 1990 the California State Park and Recreation Commission declared:

> BE IT RESOLVED that the California State Park and Recreation Commission stands in opposition to any project which would adversely affect the solitude of Bodie, or which would threaten its natural or cultural values; further, the Commission calls upon any and all controlling and /or reviewing governmental agencies, including the County of Mono and the Bureau of Land Management, to deny any proposal which may impact Bodie; finally the Commission urges the Department of Parks and Recreation and the Resources Agency of the State of California, and all other State, regional, federal, and other public and/or private agencies having influence over any such proposed project to pursue all legislative, legal, and legitimate means to prevent and eliminate any potential threats to Bodie State Historic Park.

In August 1990, the Bureau of Land Management and Mono County entered into a Memorandum of Understanding (MOU) defining roles involving proposed mining operations within the county. One month later, on September 4, 1990, the California State Legislature passed a joint resolution (SJR 60; Resolution Chapter 110) requesting the President to direct the Secretary of the Interior to protect the ghost town character, ambience, historic buildings, and scenic attributes of the town of Bodie and nearby areas.

The Mono County Board of Supervisors, in a resolution on May 24, 1991, requested Congressman George Miller to withhold introduction of his legislation (later co-sponsored with Congressman Lehman as H.R. 4370 (102nd Congress,, 2nd Session)), and though it declared that the Board, "...may not approve any exploratory or general mining project if it finds that any such project would be detrimental to the town of Bodie." The Board's resolution concluded with this declaration:

> "The prohibition of all mining activities in the Bodie Bowl, without completion and review of the foregoing studies, could prove to be substantially detrimental to the prospects for economic diversification in this rural and sparsely populated area, where the impacts of the current economic downturn are particularly acute."

On October 8, 1991, the National Park Service Completed draft documentation for the Bodie Historic District, including a map of the proposed National Historic Landmark which included nearly all of the Bodie Mining District (see **Figure 2**). The Historic Landmark had been established in 1961, but no boundary was delineated at that time. Up to date of this report, the NPS National Historic Landmark boundary had not been finalized.

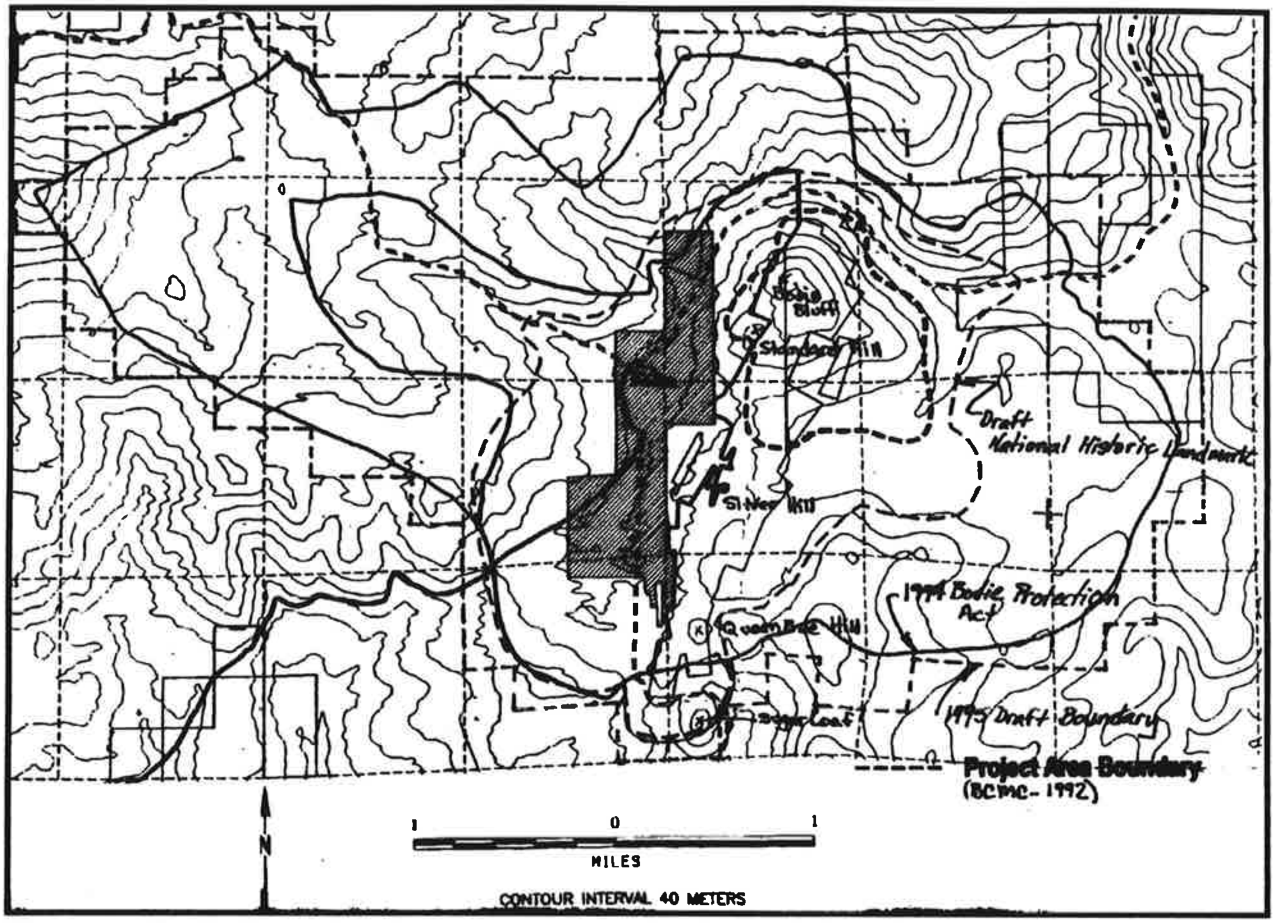


Figure 2. Bodie Bowl: Physical Features and Land Use Designations

During this period of time, the BLM's Bishop Resource Area Office was preparing a Resource Management Plan for about 750,000 acres of public land in Mono and Inyo Counties. The draft plan was completed in September 1990, the final was prepared in September 1991, the Record of Decision (ROD) which implemented the plan was signed March 25, 1993. With completion of the plan, the Bureau established a 5,935 acre Area of Critical Environmental Concern at Bodie Bowl. The primary objective is described in the ROD (p. 34):

> As a result of ACEC designation, this nationally significant resource will receive additional recognition and all mineral exploration activities will require a Plan of Operations. This gives BLM greater control over these activities. The entire ACEC will also be withdrawn from mineral entry to preclude the establishment of future mining claims within the Bodie Bowl and thereby help protect these important cultural, recreational and scenic values.

With publication in the Federal Register on June 5, 1993 (58 FR 31752), the Bodie Bowl ACEC was withdrawn from "...settlement, sale, location, or entry under the general land laws, including the mining laws...." The purpose of the withdrawal was "...to protect the nationally

significant historic resources..." The withdrawal was requested "...in aid of legislation under consideration by Congress."

On March 3, 1992 Congressmen Richard Lehman and George Miller, of California submitted HR 4370 - the "Bodie Protection Act of 1992." Although the bill was not passed in the 102nd session, it was reintroduced the first day of the 103rd congressional session as HR 240. This bill, with a only a few modifications, became law on October 31, 1994 as the Bodie Protection Act of 1994 (see below and **Appendix 2**).

The Bureau of Land Management's Bodie Bowl ACEC management plan was signed July 18, 1995. Several objectives of the plan would directly affect mining operations, these include:

- Objective A — Maintain the historic landscape within the Bodie Bowl
- Objective B — Protect the visual characteristics of the ACEC that contribute to the Bodie Experience; and ensure that any development allowed is compatible with the existing historic landscape.
- Objective E — Protect structures within the ACEC from man-caused vibration
- Objective G — Retain the existing ambient noise levels in and around Bodie that contribute to the Bodie Experience.
- Objective L — Any economic and resource development projects on federal lands will be done in a manner that will protect the historic and scenic values, and will not detract from the Bodie Experience.
- Objective M — Provide for future management of the Bodie Bowl ACEC to ensure protection of the historic and scenic values. As of the date of this report, BLM has promulgated no specific regulatory guidance for the Bodie Bowl. Our analysis and recommendations are based on those prescriptions in the Bishop Resource Area Land Use Plan and our inferences from U.S. Park Service Title 9A.

B. Purpose and Scope of Report

The Bureau of Land Management was directed to conduct mining claim validity exams within Bodie Bowl by Congress in the Bodie Protection Act of 1994 (**Appendix 2**). The relevant portion of that Act states:

> The Secretary shall undertake an expedited program to determine the validity of all unpatented mining claims located within the Bodie Bowl. The expedited program shall include an examination of all unpatented mining claims, including those for which a patent application has not been filed. If a claim is determined to be invalid, the Secretary shall promptly declare the claim to be null and void, except that the Secretary shall not challenge the validity of any claim located within the Bodie Bowl for the failure to do assessment work for any period after the date of enactment of this title. The Secretary shall make a determination with respect to the validity of each claim referred to under this subsection within two years after the date of enactment of this title.

C. Dates and Scope of Selected Events

1. Case Assignment

This mineral investigation was assigned to the Bakersfield District Manager by memorandum from the California State Director dated December 16, 1994. On January 30, 1995 a core team for this project was identified by memorandum from the Bakersfield District Manager to the State Director. In this memorandum Gregg Wilkerson (certified mineral examiner in the Caliente Resource Area) was identified as Team Leader for the project. Dr. Wilkerson assembled the team listed in **Appendix 3**. The project core team consisted of BLM geologists, Larry M. Vredenburgh, Rob Waiwood and Cheryl Seath and two geologists from the U.S. Bureau of Mines, Mike Thomas Sweeney and Mike Lane, who participated in the field work of the 1995 season under an inter-agency agreement (B950-A5-0007, April 21, 1995). Due to budget restraints, this agreement was terminated on August 11, 1995. Cheryl Seath left the team for training and Jim Haerter (an assciate team member) took a team leader position in the Fluid Minerals Program, Caliente Resource Area on January 16, 1996. Cheryl Seath re-joined the core team in October, 1996 to assist with GIS applications for this project. Steve Nelson assisted with computer-assisted mapping and other GIS functions throughout the project. Max Viger and Karen Margrave, with the BLM Caliente Resource Area Office, also assisted with GIS mapping products. Anne Falcon and Carlos Lara pulled together mining claim title information from BLM State Office files.

2. Case History

The actions and events that took place prior to enactment of the Bodie Protection Act are listed chronologically in **Appendix 4.** A summary of the regulatory and administrative activity associated with this validity examination after date of enactment of the Bodie Protection Act is in **Appendix 5**.

3. Contacts with Operator and Claimants

The Bodie Consolidated Mining Company holds 209 unpatented lode claims and 23 unpatented placer claims, the J.S. Cain Company holds 117 unpatented lode claims and one unpatented placer claim, the Lost Carcass and Buzzard Mining Company holds four unpatented lode claims and two unpatented mill sites, Greg Firman holds four unpatented lode claims, and the Washington Gold Mining Company holds one unpatented placer claim.

The Bodie Consolidated Mining Company (BCMC) is a wholly-owned subsidiary of Galactic Resources Limited (GRL), which is currently in bankruptcy proceedings. The claims owned by the Lost Carcass and Buzzard Mining Company and the J.S. Cain Company are under lease to GRL. The Trustee for GRL (as a result of the bankruptcy) is KPMG, Peat Marwick Thorne Chartered Accountants of Vancouver, British Columbia. Their officer for the Galactic trusteeship is Robert Rusko. A listing of BLM contacts with Mr. Rusko is given in **Appendix 6A**. Official contacts with Robert Miller of Lost Carcass and Buzzard Mining Company are listed in **Appendix 6B**. Contacts with the other claimants are documented in **Appendix 5**.

LANDS INVOLVED

A. General Land Status

As defined by Congress in the Bodie Protection Act of 1994, the boundary of Bodie Bowl approximately followed the watershed of upper Bodie Creek. The legal description of the Bodie Bowl Area of Critical Environmental Concern (ACEC) was published in the Federal Register on June 4, 1993 (see section "B" below, and **Appendix** 7). A draft legal description of the lands withdrawn by Congress has been prepared by the BLM Bishop Resource Area office. The draft legal description is nearly identical to that of the ACEC, the differences are shown in bold type in section "B" below. Although the area withdrawn by Congress has not been established by publication in the Federal Register, the draft legal description is the area being considered for this report.

There are three categories of land in the Bodie Bowl:

1. Patented mining claims and other private lands: 836 acres or 9.2%.
2. Lands administered by the Bureau of Land Management: 7,658 acres or 84.9%
3. State Lands administered by the California Department of Parks and Recreation: 539 acres or 6.0%.

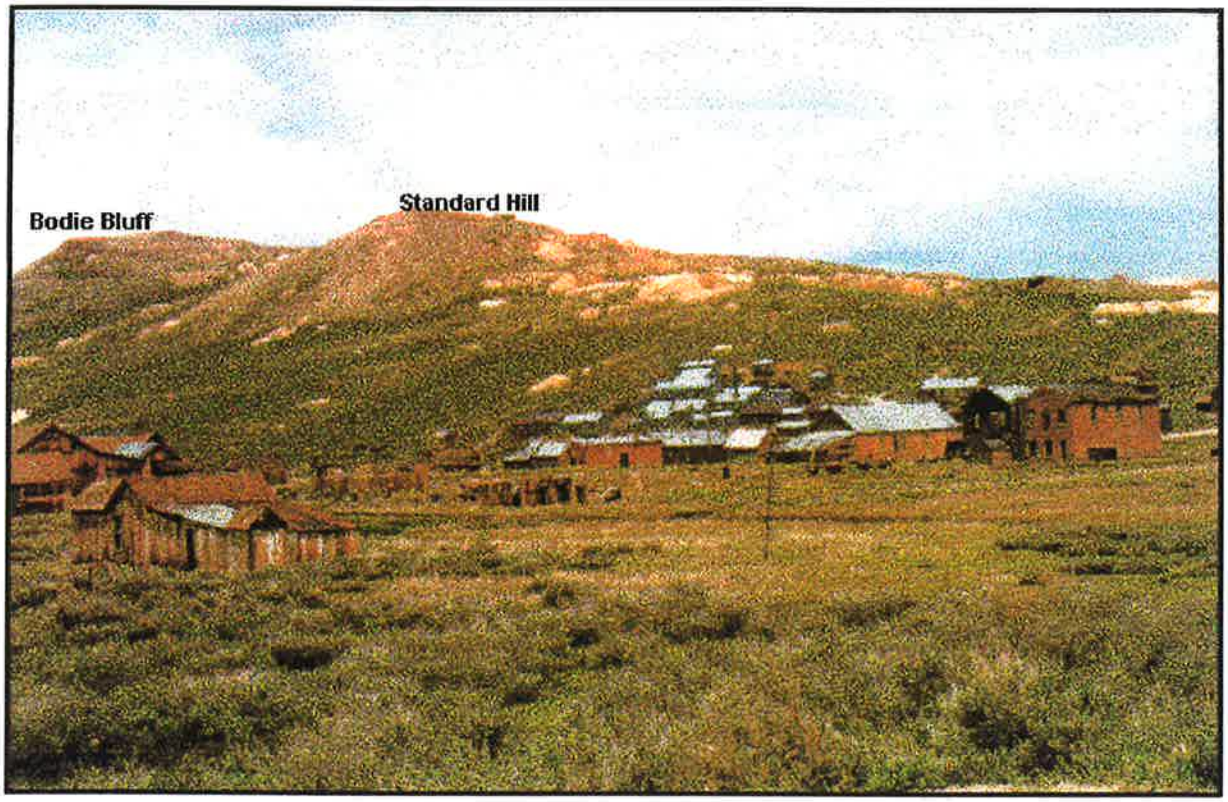
Land Status is illustrated in **Maps 1 through 6**. The total area encompassed by the Bodie Bowl, as defined by the Bodie Protection Act is 9,023 acres. Bodie State Historic Park is completely within the Bodie Bowl.

B. Legal Description of Lands Withdrawn from Mineral Entry on June 4, 1993

Mount Diablo Meridian

T. 4 N., R. 26 E.,
Sec. 1, SE¼NE¼, S½SW¼, and SE¼;
Sec. 11, NE¼NE¼;
Sec. 12, N½, N½SW¼, SE¼SW¼, and SE¼;
Sec. 13, NE¼NE¼;

T. 4 N., R. 27 E.,
Sec 3, lot 11;
Sec 4, S½N½ and S½
Sec 5, S½SW¼ and SE¼ **(draft description: Sec. 5, S½)**
Sec 6, lots 5 to 7, inclusive, E½SW¼, and SE¼;
Sec 7, lots 1 to 4, inclusive, E½, and E½W½;
Sec 8, N½, SW¼, N½SE¼, and SW¼SE¼;
Sec 9, all Federal land in section;
Sec 10, lots 2, 3, 7, 8 and W½;
Sec 11, W½NW¼;
Sec 14, SW¼NE¼, W½NW¼, SE¼NW¼, SW¼, and NW¼SE¼



Bodie townsite. Standard Mill is large building with gray steel covering.

Sec 15, lots 1 to 8 inclusive, and W½;
Sec 16, all Federal land in section;
Sec 17, W½NE¼, W½ and all Federal land in SE¼SE¼;
Sec 18, lot 1, NE¼, E½NW¼ and NE¼SE¼;
Sec 20, lots 1, 2, 3, and 8, and NE¼; **(draft description: "..and all Federal land in N½")**
Sec 21, lots 1, 3, 4, and 5, NE½;
Sec 22, lots 1 to 4 inclusive, lots 7 and 8, and NW¼;
Sec 23, N½NW¼ and SW¼NW¼

C. Statutes and Regulations Affecting Mining

1. Bodie Protection Act

For this report we developed a mine plan which a prudent person would conduct based on economic feasibility and which incorporates environmental mitigation measures in its design. These measures must meet the requirements of the BLM Bishop Resource Area Resource Management Plan, the Bodie Bowl ACEC Plan, the Bodie Protection Act, and the BLM's Surface Management regulations at 43 CFR Section 3809. All development and mitigation must be subject to valid existing rights as of the date of withdrawal. The Bodie Protection Act of 1994 was signed into law October 31, 1994 (**Appendix 2**). Two sections of the Act are particularly relevant to examination of mining claims at Bodie. Section 1004 withdrew the lands from the 1872 mining law, and Section 1005 (d) directed BLM to develop mining regulations which were "no less stringent than the rules promulgated pursuant to the Act of September 28, 1976 entitled `An Act to provide for the

regulation of mining activity within, and to repeal the application of mining laws, to, areas of the National Park System, and for other purposes' (Public Law 94-429; 16 U.S.C. 1901-1912)."

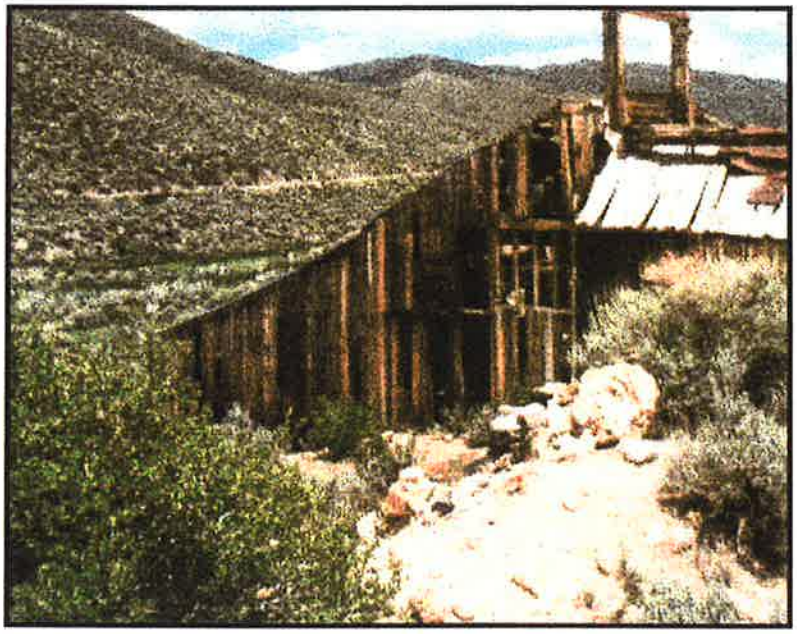
The 43 CFR 3809 regulations, were promulgated "...to prevent unnecessary or undue degradation of Federal lands which may result from operations authorized by the mining laws..." on lands administered by BLM. Subpart §3809.0-5(k) states,

> Failure to comply with applicable environmental protection statues and regulations thereunder will constitute unnecessary or undue degradation. Where specific statutory authority requires the attainment of a stated level of protection or reclamation, such as in the California Desert Conservation Area, Wild and Scenic Rivers, areas designated as part of the National Wilderness System administered by the Bureau of Land Management and other such areas, that level of protection shall be met. Section 1005(a) of the California Desert Protection Act is now the "...statutory level of protection..." as required by 43 CFR 3809.0-5(k). Absent additional regulatory guidance, this examination will follow the 3809 regulation. When final Bodie Bowl regulations are promulgated, the validity of some claims might cease due to increased mining costs associated with more stringent environmental requirements. Draft Bodie Bowl regulations were published in the Federal Register on November 8. 1996. The comment period closed on January 7, 1997. Final regulations have not been published.

2. National Park Service Regulations

The National Park Service regulations are found at Title 36 CFR Section 9. These are examined because the Act requires that these regulations be the minimum standard of environmental protection. As such, they would provide a framework for evaluating feasibility under the unnecessary or undue degradation provisions of the regulations at 43 CFR 3809.

However, since BLM regulations have not been promulgated for mining operations within Bodie Bowl, 36 CFR 9.10 (a) of the NPS regulations are reproduced below to provide the reader with an picture of what a portion of the BLM regulations might look like. NPS regulations state the Regional Director shall not approve a plan of operations under the following circumstances.



Gray's Mill: This historic structure is on BLM land in the north eastern part of the Bodie Bowl along Bodie Creek.

(1) For existing or new operations if the claim was patented without surface use restrictions where the operations would constitute a nuisance in the vicinity of the operation, or would significantly injure or adversely affect federally owned lands; or

(2) For operations which had not significantly disturbed the surface of the claim for purposes of mineral extraction prior to January 26, 1977, if the claim has not been patented, or if the patent is subject to surface use restrictions. Where the operations would preclude management for the purpose of preserving the pristine beauty of the unit for present and future generations, or would adversely affect or significantly injure the ecological or cultural resources of the unit. No new surface mining will be permitted under this paragraph except under this standard; or

(3) For operations which had significantly disturbed the surface of the claim for purposes of mineral extraction prior to January 26, 1977, if the claim has not been taken to patent, or the patent is subject to surface use restrictions, where the operations would constitute a nuisance in the vicinity of the operation, or would significantly injure or adversely affect federally owned lands. Provided, however, operations under this paragraph shall be limited by the provisions of § 9.4, notwithstanding the limitation of that section's applicability to the three enumerated units;

(4) Where the claim, regardless of when it was located, has not been patented and the operations would result in the destruction of surface resources, such as trees, vegetation, soil, water resources, or loss of wildlife habitat, not required for development of the claim.

While surface mining was conducted at the Warm Springs talc mine in Death Valley National Monument after promulgation of these regulations, the site is in an out-of-the-way canyon. A potential open pit mining operation on Standard Hill and Bodie Bluff, adjacent to the town site of Bodie, would have to overcome the "nuisance" restriction.

3. Mining in a National Historic Landmark

Activities which may adversely affect a National Historic Landmark are regulated by the National Park Service. These regulations are found in Title 36 CFR 800.8, §800.9(c)(2), and §800.10. These regulations do not set up a means for regulatory management of mining activity in the Bodie Bowl. They merely sets up the adversarial councils procedure for an adverse appeal. Activities (including mining) are still managed under Part 9A.

D. Title Data

1. Patented Mining Claims

There are 79 patented mining claims in the Bodie Bowl. These are itemized below in **Table 1** and are plotted on **Maps 1 through 6**.

2. Unpatented Mining Claims

This study identified several deficiencies in mining claim titles throughout the district. Some of these deficiencies have yet to be corrected. Based on the BLM official records of mining claims and pursuant to the regulations at 43 CFR 3833, the owners of record for the mining claims in this investigation are listed in Tables 1 and 2. A list of all unpatented mining claims within Bodie Bowl, that includes acreage both within and outside the area of alteration is found in **Appendix 1**.

Table 1
Patented Mining Claims

Claim Name	Sections	Acres	Date Patented	Mineral Survey #	Pat. Number	Owner/Mono County Lot Number
Bullion	9,16	20.66	Jan 8, 1877	428	2095	CAIN 13-04-06
Osceola	9	20.66	Aug 31, 1877	493A	2471	LOST CARCASS 13-04-03
Osceola Millsite	9,10	5.00	Aug 31, 1877	493B	2471	LOST CARCASS 13-04-01
Tioga	9,10	20.66	Aug 31, 1877	539	2472	LOST CARCASS 13-04-03
Bryant Lode	21	3.43	Apr 15, 1879	656	3140	CAIN
Olden Lode	17	3.43	Apr 15, 1879	655	3141	STATE PARKS
Ralston No. 1 North	9,16	2.00	Nov 1, 1879	953	3511	CAIN 13-04-06
Packard & Morton Q.M.	16	3.44	Dec 16 1879	954	3616	CAIN 13-06-01
Red Cloud Q.M.	16,9	3.44	Mar 22, 1880	954	3825	CAIN 13-06-01
Ralston No. 2	16	2.11	Mar 22, 1880	953	3832	CAIN 13-04-06
West Bullion	9,16	15.44	Mar 30, 1880	938	3859	CAIN 13-04-06
Monogahela	16	1.93	May 16, 1881	780	4668	CAIN 13-04-06
Allegheny	16	1.86	Dec 16, 1881	783	4669	CAIN 13-04-06
Glencoe	16	2.61	May 16, 1881	785	4670	CAIN 13-04-06
San Nicolas	16	1.55	May 16, 1881	786	4671	CAIN 13-04-06
Dudley	16	1.61	May 16, 1881	788	4672	CAIN 13-04-06
San Pedro	16	1.95	May 16, 1880	796	4673	CAIN 13-04-06
Insurance	16	2.31	May 16, 1881	797	4674	CAIN
Security	16	2.75	May 16, 1881	800	4675	CAIN 13-04-06
Captain Haynie	16	2.45	May 16, 1881	802	4676	CAIN 13-04-06
Dearborn	16	3.13	May 16, 1881	804	4677	CAIN 13-04-06

Table 1
Patented Mining Claims

Claim Name	Sections	Acres	Date Patented	Mineral Survey #	Pat. Number	Owner/Mono County Lot Number
Solano	16	2.84	May 16, 1881	805	4678	CAIN 13-04-06
Baltimore American Q. M.	16	3.45	May 16, 1881	808	4679	CAIN 13-06-01
Bonanza Q.M.	16	3.45	May 16, 1881	809	4682	CAIN 13-06-01
Curry Q. M.	16	3.45	May 16, 1881	810	4683	CAIN 13-06-01
Palfrey Lode	17,20	3.43	Jun 15, 1881	823	4747	STATE PARKS
Russian Lode	17,20	3.43	Jun 15, 1881	825	4748	STATE PARKS
Mars Lode	17,20	3.43	Jun 15, 1881	824	4749	STATE PARKS
Johnson Lode	20	3.43	Jun 30, 1881	813	4791	STATE PARKS
Sitting Bull	9	2.24	Dec 20, 1881	955	5186	CAIN 13-04-06
Central Lode	9	2.22	Dec 20, 1881	1510	5189	CAIN 13-04-0?
Argentine	9	2.22	Dec 20, 1881	955	5190	CAIN 13-04-06
San Francisco	9	2.41	Dec 20, 1881	1510	5191	CAIN 13-04-0?
Ohio Lode	9	2.47	Dec 20, 1881	955	5192	CAIN 13-04-06
Pennsylvania	9	2.35	Dec 20, 1881	955	5193	CAIN 13-04-06
Red Lion	9	9.70	Dec 20, 1881	961	5194	CAIN 13-04-0?
Tioga South Mine	9	1.07	Dec 20, 1881	961	5195	CAIN 13-04-06
December Mine	9	0.53	Dec 20, 1881	959	5196	CAIN 13-04-0?
Lizzie Q.M.	16	3.41	Dec 20, 1881	959	5210	CAIN 13-06-01
Inca Quartz Q.M.	16	2.29	Feb 15, 1882	1054	5359	CAIN 13-06-01
Red Jacket Q.M.	16	3.42	Nov 29, 1882	1538	6803	CAIN 13-06-01
Bruce Lode	9,16	1.99	Sep 24, 1883	1230	8213	CAIN
Granger Lode	9,16	0.58	Sep 24, 1883	1231	8214	CAIN
Gildea Lode	9,16	2.62	Sep 24, 1883	1928	8215	CAIN

Table 1
Patented Mining Claims

Claim Name	Sections	Acres	Date Patented	Mineral Survey #	Pat. Number	Owner/Mono County Lot Number
Edith Lode	9,16	2.59	Sep 24, 1883	1234	8216	CAIN
Bodie Lode	9,16	2.56	Sep 24, 1883	1235	8217	CAIN
Lucky Jack Lode	16	16.03	Sep 24, 1883	1902	8218	CAIN 13-04-06
Molly Lode	16	3.41	Sep 24, 1883	1233	8219	CAIN
Burgess	9,16	3.44	Jan 10, 1884	1271	8638	CAIN
Hayward (Goodshaw)	16	8.22	Jun 30, 1886	2162	10739	CAIN
Ajax	16	16.81	Feb 7, 1887	2246	11544	CAIN 13-04-06
Coupon	16	10.84	Nov 19, 1889	2247	15380	CAIN 13-04-06
Rustler	16	1.91	Jan 10, 1881	2276	17014	CAIN
Stonewall	9	0.58	Feb 7, 1891	953	17291	CAIN 13-04-06
Homestake	9	0.58	Feb 7, 1891	953	17292	CAIN 13-04-06
Accepted	16	3.43	Mar 4, 1891	1331	17415	CAIN
Golding	16	3.43	Mar 4, 1891	1331	17416	CAIN
Gazelle	16	3.43	Mar 4, 1891	1331	17417	CAIN
Rustler	16	0.23	Mar 4, 1891	2275	17419	CAIN
Hobart	9	17.54	May 4, 1891	2257	25570	CAIN 13-04-06
Cluff	21	10.92	Jun 17, 1899	3570	31184	TAYLOR-HOMESTAKE
Sunshine	9,10,16	14.68	Jun 17, 1899	3584	31185	LOST CARCASS 13-04-02
Defiance Q.M. (Oro)	16	19.56	Oct 23, 1899	3440	31586	CAIN 13-06-01
Phoenix Lode	21	19.28	Nov 3, 1899	3460	31654	CAIN
Contention Q. M.	16	4.17	Nov 3, 1899	3459	31655	CAIN 13-06-01
Adrian Q.M.	16	19.06	Nov 16, 1899	3456	31743	CAIN 13-06-01
Blue Vein Lode	21	19.52	May 03, 1902	3704	35413	CAIN
Bishop Q.M.	16,21	8.11	Oct 26, 1903	3452	37233	CAIN 13-06-01
New Enterprise Q.M.	16,21	20.54	Oct 26, 1903	3451	37234	CAIN 13-06-01

Table 1
Patented Mining Claims

Claim Name	Sections	Acres	Date Patented	Mineral Survey #	Pat. Number	Owner/Mono County Lot Number
Black Rock Q. M.	16	4.38	Mar 11, 1904	3458	38183	CAIN 13-06-01
Arthur	16	4.12	Dec 26, 1907	3599	41321	TAYLOR-HOMESTAKE
Whitney	9,10	20.47	Apr 23, 1907	4464	44831	LOST CARCASS 13-04-03
Eva	9	18.67	Feb 10, 1910	3698	110009	LOST CARCASS 13-04-05
Residium Q. M.	16	17.30	Jan 13, 1933	6021	1060870	CAIN 13-06-01
Noonday, North Noonday, Virginia	16,21	35.52	Jan 28, 1936	6023	1081142	CAIN 13-06-01
Snowdrift Lode	21	9.23	Mar 27, 1936	6022	1082331	STATE PARKS
Packard Annex Q.M.	16	3.47	Nov 27, 1939	6226	1105988	CAIN 13-06-01

Table 2 lists the number of unpatented mining claims located within and outside of the zone of wall-rock alteration in Bodie Bowl. Our investigation found that all historic mineral development has occurred only within this zone.

Table 2
Number of Unpatented Lode Mining Claims
Located within Altered and Unaltered Areas by Claim Ownership

Claim Block/ Claim Owner	Altered	Unaltered
NLM (Bodie Consolidated Mining Co.)	1	36
GSI (Bodie Consolidated Mining Co.)	9	145
Zeus (J. S. Cain Co.)	80	30
Other Claims/Owners	31	0
TOTAL	121	211

3. Chain of Title Data - from BLM Records

a. Homestake and Bodie Consolidated Mining Company

Homestake Mining Company and Bodie Consolidated Mining Company are claimants of record on the Blue Point (CAMC 39210), located July 1, 1927 by J. E. Gray; the Blue Point North Extension (CAMC 39211), located July 1, 1929 by J. E. Gray, and the Consolidated Pacific (CAMC 39212), located March 19, 1901 by L. Lewis. Amended Location notices for the three claims were filed by Lauretta Gray on September 1, 1982. The claims were transferred to Homestake Mining and Bodie Consolidated on April 20, 1988.

The Zeus #85 (CAMC 71918), was located on August 4, 1980, by Homestake Mining Company. Bodie Consolidated Mining Company was added as co-owner on August 17, 1988. Galactic has not performed the proper change of title actions to remove Homestake as co-owner.

The Zeus #86A (CAMC 151953), was located on May 15, 1984, by Homestake Mining Company Bodie Consolidated Mining Company was added as co-owner on July 5, 1988.

The lode claim block NLM #1 through 42 (CAMC 182621 through 62), was located on June 11, 1986 by Homestake Mining Company. Bodie Consolidated Mining Company was added as co-owner on July 5, 1988.

The Central Pacific (CAMC 117665); the Union Pacific (CAMC 117666) and the Trust (CAMC 117667) lode mining claims were located by Lauretta Gray on September 1, 1982. The transfer of interest to Bodie Consolidated Mining and Homestake took place on April 20, 1988.

In 1988 Homestake began the transfer of their interests to Bodie Consolidated Mining Company (BCMC) in three stages. The first transfer was 50% of their interests in August 1988 (copies provided by Homestake), 25% of their interests in September, 1989 (statement by Homestake), and the final 25% interest in August 1990 (copies provided by Homestake). The August 1990 final transfer was filed with the Mono County Recorders Office, but not with the BLM.

Discussions with Homestake personnel on May 21, 1996 indicate that Homestake has no property interest in any Bodie claims at this time. All their claim interests were sold to Galactic. Galactic has yet to submit the proper documentation to BLM remove Homestake Mining Company as co-owner of these mining claims.

b. Bodie Consolidated Mining Company

The GSI block of lode mining claims was located by Bodie Consolidated Mining Company (BCMC) from June 3, 1988 through June 16, 1988, and August 9, 1988. The claims are: GIS Numbers 12-20, 45-53, 77-87, 107-128, 131-133, 136-138, 297-300, 300A, 318-332, 363-364, 397, 407-413, 417A, 418A, 582-592, 603-612, 623-632, 633A, 643-648, 660-664, 674-680, 690-695, 706-709, 721-723, 1471-1472, 1477, and 1479. The CAMC numbers for these claims are supplied in **Appendix 1**.

Bodie Consolidated Mining Company located placer mining claims BCP Numbers 1-23, CAMC 238509 through 238531, from August 7, 1990 through September 10, 1995.

Bodie Consolidated Mining Company located the Coupon Gap (CAMC 240739), October 3, 1990; the Ajax South (CAMC 240740), October 3, 1990; the BLM (CAMC 240741), October 3, 1990; the Arthur 1 (CAMC 240742), November 1, 1990; the Arthur 2 (CAMC 240743), November 1, 1990, and the Amarillo (CAMC 240744), Amarillo November 1, 1990.

c. Homestake and J.S. Cain Company

Homestake Mining Co. and the J. S. Cain Company were listed on BLM records in 1996 as joint owners of mining claims CAMC 39090 through 39099, 39101, and 39103 through 39209. Of these, all are lode claims except for CAMC 39101 which is a placer. On January 6, 1996, Patricia Cain submitted proof of 100% ownership for these claims. BLM records now reflect these changes. The J. S. Cain Company, since the early 1900s, located or acquired 118 unpatented mining claims east of the town of Bodie. The Aurora Association Placer (CAMC 39101) was located on January 10, 1928. In June 1976, Homestake Mining became operators with an option to purchase both the patented lands and unpatented mining claims. The option to purchase has not been exercised.

Mrs. Cain continued to receive lease payments from Galactic's trustee for these claims up to 1997. In that year, California State Department of Parks and Recreation and the American Land Conservancy purchased the private lands, mineral leases and unpatented mining claims from Galactic's trustee. The California State Department of Parks and Recreation and the American Land

Western part of the Bodie Bowl. View is to the west from Bodie Bluff.

Conservancy in the same escrow action, purchased the private Cain lands, mineral leases and unpatented claims under a $5,500,000 buy-out provision of Galactic's mineral leases.

d. The Lost Carcass and Buzzard Mining Company

Four lode and two mill site claims were located by Judd Boynton in the Bodie Bowl. They are the Morning Star (CAMC 39213), located August 16, 1971; the Antoc (CAMC 39214), located November 22, 1939; the Tioga North (CAMC 39215), located June 17, 1976; the Oceola North (CAMC 39216) located June 6, 1976; the Parker Whitney Mill site (CAMC 39217), located August 9, 1972, and the Margie Mill site (CAMC 39218), located August 1, 1939.

Judd Boynton added his wife, Anne Boynton, and his son, William Boynton as co-owners. According to William Boynton, Judd Boynton gave his share to Bob Miller of the Lost Carcass and Buzzard Mining Co. around 1981. Judd convinced his wife, Anne, to do the same. Judd Boynton died in 1983.

Bob Miller of the Lost Carcass and Buzzard Mining Co. stated that Judd Boynton transferred his share of the six claims on April 26, 1982 to Western Resources. On this same date, Western Resources transferred the claims to the Lost Carcass and Buzzard Mining Co. It was unclear as to when or if Anne Boynton transferred her share of the claims to the Lost Carcass and Buzzard Mining Co. No quitclaim deeds or other transfer papers have been filed with the BLM transferring ownership from Judd and Anne Boynton to Lost Carcass and Buzzard Mining Co.

In 1982, William Boynton, instead of selling his share to Lost Carcass and Buzzard Mining Co., joined the company, and received a 10 percent interest in the operation. He did not like the way the company was run and disagreed with the proposed open pit operation at Bodie. Therefore, in October, 1992, he wrote a statement to BLM, withdrawing himself from the company. This letter is in the official BLM mining claim recordation file. William Boynton considers this to be a quitclaim deed transferring ownership to the Lost Carcass and Buzzard Mining Company.

On June 1, 1995, a transfer of interest was filed with the BLM which transferred all of William Boynton's interests (one third share) in the four lode claims to the Lost Carcass and Buzzard. Anne and Judd Boynton retained one third share each in the lode claims. Judd Boynton, Anne Boynton, and William Boynton retained ownership of the two Mill site claims.

Bob Miller of the Lost Carcass and Buzzard Mining Co. stated that the June 1, 1995 transfer of claims from William Boynton to Lost Carcass and Buzzard should have reflected all 6 claims including the mill sites. Mr. Miller was provided with instructions on how to obtain a clear title to the old Boynton Claims on January 17, 1996. He has yet to publish a notice in the Mono County newspaper for the proscribed length of time which would enable him to have the Boyntons removed from BLM's official mining claim records.

e. Greg Firman and the Wild Rose group of lode claims

William Boynton located the Wild Rose No 1 (CAMC 185207), on October 8, 1986; the Wild Rose No 5 (CAMC 185210) on October 14, 1986; the Wild Rose No 7 (CAMC 185211), on October 8, 1986 and the Wild Rose No 7 West (CAMC 185212) on October 8, 1986. He transferred the claims to Greg Firman on December 7, 1992. In an undated letter, Mr. Firman gave Bob Miller the right to act as his agent for these claims.

Bob Miller continued to receive lease payments for these claims from Galactic's trustee up to 1994. In 1992 Galactic failed to pay the annual assessment fees for some of the Wild Rose claims, and those claims were abandoned and void. However, in 1996 BLM re-instated the claims based on a provision of the Bodie Protection Act which allowed claimants to file intents to hold instead of performing annual assessment work (or pay the $100 per claim holding fee). The claimants did not file an intent to hold for the 1998 fiscal year before Sept. 30, 1997. The Wild Rose claims are now abandoned for lack of timely filing of an intent to hold.

f. Washington Gold Mining

Geoffrey Garcia, agent for Sundesert Mining Company, located the placer mining claim, Gold's Ghost #1 (CAMC 223339), April 7, 1989. The claim was transferred to Ralph L. Phelps Jr. on October 16, 1991. The claim was transferred to Sundesert Mining Company on June 1, 1993. The claim was transferred to Washington Gold Mining on June 1, 1993.

g. Galactic Resources

Bodie Consolidated Mining Company is a wholly-owned subsidiary to Galactic Resources Ltd. The private lands (owned by the J.S. Cain Company, Lost Carcass and Buzzard Mining Company), and the unpatented mining claims in the Bodie Bowl are all under Galactic's control either through ownership by BCMC or by lease from the other land owners and claimants. The only exception is the Ghost's Gold #1 placer claim. It is located on a ridge outside the mineralized zone for lodes.

E. Other Valid Existing Rights

1. Realty Rights of Way

The following rights of way are located within the Bodie Bowl (see Master Title Plat, Map20). The distances listed are that portion within the Congressional withdrawal:

-CAS 0078455, 80' wide 60 KV power line on poles, 3.0 miles.
-CAS 0078455, 50' wide telephone line on poles, 1.0 mile.
-CACA 19077, 20' wide underground telephone cable, 1.0 mile.
-CACA 19073, 80' wide water pipeline, Geiger Grade pipeline 3.0 miles.
-CACA 27814, 20' wide water pipeline and spring development, Milk Ranch canyon 300'

RS 2477 Rights of Way:

-Geiger Grade road, 2.75 miles
-Bodie-Aurora road, 2.0 miles
-Cottonwood Canyon road, 1.2 miles
-Highway 270, 0.6 mile

2. Other withdrawals and designations

Bodie Withdrawal: CACA 31729, June 4, 1993 (58 FR 31752) . Withdrew lands within the Bodie Bowl ACEC from "settlement, sale, location, or entry under the general land laws, including the mining laws" for a period of two years. Includes a legal description of the ACEC.

Bodie WSA: CA-010-100, 2200 acres within Bodie Bowl, extends north of Geiger Grade road and Bodie Creek road.

Mt. Biedeman WSA: CA-010-095, 300 acres within Bodie Bowl, bounded by Bodie road and Cottonwood Canyon road.

Bodie Bowl ACEC: Totally enclosed by Congressional withdrawal. Established by publication of Bishop Resource Area Resource Management Plan, Record of Decision, March 25, 1993.

Bodie National Historic Landmark: Designated July 4, 1961.

3. Livestock Related Encumbrances

-Bodie Mountain cattle allotment 6071, 90% of withdrawal in allotment.
-Mt. Biedeman sheep allotment 6084, 5% of withdrawal in allotment.
-Geiger Grade Pipeline: 50 foot pipeline and livestock trough #7728.
-Bodie Mountain 50' diameter dirt reservoir #7776.
-Potato Peak allotment boundary fence #7709 4.3 miles in withdrawal.
-Geiger Grade Wildlife Exclosure #7803 and #7804.
-7-troughs Fence: pasture fence #7788, 0.5 mile within withdrawal.

PHYSIOGRAPHIC DATA

A. General

The physiographic condition of the Bodie Bowl is herein described in order to provide a basis for future reclamation, threatened and endangered species compensation or other costs associated with environmental compliance. We describe in this section legal mitigation requirements and operating limitations on the project.

Sugarloaf Peak. View is to the south from Silver Hill.

Bodie Bowl is located in Mono County, east of the Sierra Nevada Range (Map 6). The site is about 120 miles south of Reno, Nevada, and 350 miles north of Los Angeles. U. S. Highway 395 is the primary north-south route along the eastern Sierra Nevada. Bodie is situated about 18 highway miles southeast of Bridgeport, the Mono County seat, and 25 miles northeast of Lee Vining . Primary road access to Bodie is via State Route 270, also known as Bodie Road, from US 395. The first 13 miles of this road from US 395 is paved the remainder is improved dirt. Bodie is also accessible from State Route 167 via Cotton Canyon Road - which is an improved dirt road.

B. Physiography

Bodie Bowl is within the Bodie Hills, a range of mountains 390 square miles in extent. The Bodie Hills have elevations which range from 6,000 to 10,236 feet above mean sea level. Six peaks exceed 9,000 feet. The southern fringe of the hills drain south into Mono Lake. The central and northern portion of the Bodie Hills drains into the East Walker River principally via Bodie Creek or Rough Creek and then to Walker Lake. The town site of Bodie is situated at an elevation of 8,369

feet above mean sea level. Bodie Mountain, situated northwest of the town site of Bodie, is the highest point within Bodie Bowl. Located just east of the town site of Bodie is a three-mile long north-south trending ridge which from north to south consists of Bodie Bluff (elevation. 8,960 feet), Standard Hill (elevation. 8,840 feet), Silver Hill (elevation 8,680 feet), Queen Bee Hill (elevation 8620 feet), and Sugarloaf (elevation 8,665 feet). The lowest elevation, about 8,040 feet, is on Bodie Creek in the northeast corner of Bodie Bowl (**Figure 2**).

The Bodie Bowl embraces the upper-most watershed of Bodie Creek. Bodie Creek flows north about 14 miles into Nevada to a point about 7 miles northwest of the site of the historic mining community of Aurora. Here it joins Rough Creek, which continues northwest about 5 miles to the East Walker River. Taylor Gulch drains the east side of the ridge that extends from Bodie Buff to Silver Hill, including the tailings pond area. It flows north and joins Bodie Creek.

C. Flora

Diverse plant communities comprise the Bodie Bowl including; mountain big sagebrush, low sage, and wet and dry meadow complexes. The mountain big sagebrush community is dominated by *Artemisia tridentata* ssp. *vaseyana* and curly leaved rabbit brush (*Chrysothamnus viscidiflorus*). Understory species include buckwheat species (*Eriogonum microthecum, E. umbellatum*) and lupine spp. Low sage communities which occur on predominately clay mixed, cobble-rich soils are dominated by *Artemisia arbuscula*. Understory grass species in these sagebrush steppe communities include needle grass spp. (Acnatherum spp.) primarily *Acnatherum occidentalis* (Western needle grass). The wet meadow communities that are in association with Bodie Creek are dominated by Nebraska sedge (*Carex nebraskensis*), baltic rush (*Juncus bulticus*) and Nevada bluegrass (*Poa secunda* ssp. *juncifolia = Poa nevadensis*). Dry meadows are dominated by *Carex douglasii* and *Juncus baliticus* (Halford, A., personal communication). There are a few small groves of aspen trees and occasional cottonwood trees along stream courses.

There are no threatened or endangered species of flora in the Bodie Bowl at the present time.

D. Wildlife

The wildlife community in the Bodie Bowl reflects its position at the Sierra/Great Basin ecozone. The Bodie Bowl is an important habitat component within the migratory route of the Mono Lake and East Walker mule deer herds. Other large mammals include pronghorn antelope and coyotes; black bears may occasionally visit from the surrounding hills. Small mammals (such as badgers, golden mantled ground squirrels and Belding's ground squirrels) and birds are representative of the Sierra and mountain ranges of the Great Basin. Migratory birds use the old Bodie tailing ponds seasonally, and a very large winter concentration of black rosy finches uses the mine shafts as roost sites. Sage grouse strutting grounds (leks) are found in the Bodie Bowl and are subject to special protection on BLM lands, and a large number of sage grouse use roosting areas on the rim of the Bowl. Due to its central location in the Bodie Hills and presence of key vegetation types, such as meadow, aspen grove and riparian, providing habitat to high profile species, the area is subject to Desired Plant Community management. Bodie Creek does not currently support fish within the Bowl but is depended upon to deliver clean water to trout, including reintroduced endangered Lahontan cutthroats, further downstream. The State Park's livestock exclusion fence is expected to benefit BLM's restoration efforts on the creek (Fatooh, personal communication, 1996).

The mine dumps of the Bodie Bowl are habitat for the Bushy-tailed woodrat (*Neotoma cinerea)*. These animals colonize particular dumps and do not interact with one another and are hyperterritorial. If killed by drought or disease, their borrows may be taken over by other woodrats.

There are no threatened or endangered species of fauna in the Bodie Bowl at the present time. No bats have been found to roost in the mine workings within the Bodie Bowl.

E. Climate

The mean annual precipitation at the Bodie weather station is approximately 14.3 inches. Total precipitation has ranged from 7.26 inches in 1903 to 27.37 inches in 1965. The greatest precipitation occurs as snow from November to March, usually peaking in January (Beak, 1992).

The month of July has the highest average maximum temperature (84.1° F.) and the highest average minimum (22.2° F). The coldest month is January . The record maximum temperature occurred in July 1905 (93°F) and the record low in February 1903 (-36°F, Beak, 1992).

Snow is generally present from late October to late May and may extend to July. Bodie is the coldest weather station in the state of California with an average of no more than three consecutive frost free days a year. Winds have been clocked at more than 100 miles per hour.

F. Soils

Volcanic debris and soil cover all of the Bodie Bowl. On the tops and on steep sides of hills in the Bodie Bowl, there is no soil. In most areas the soil is poorly developed and depth to bedrock is less than 3 feet. At the Bodie town site and along the floodplain of Bodie creek, soils are black to gray sandy mud up to 20 feet thick.

G. Cultural and Anthropological Resources

A inventory recorded 17 sites and 44 isolated prehistoric archeological occurrences in the area east of the State Park. In general, the predominant use of the area appears to be related to temporary camps used for making tools from Bodie obsidian and for hunting. The presence of a full time range of diagnostic Great Basin projectile point types indicates the location was re-occupied on numerous occasions over a long period of time. The sites are characterized as: three occupation or temporary camps; four task-specific travel stops; five task-specific hunting sites; and five with undefined function. The temporary camps are multi-component, and represent cultural periods from Pre-archaic through Late Archaic.

The historic physical remains include evidence of mining - from abandoned prospects to the major industrial properties, together with the waste rock and tailings, and support facilities such as transport and water networks; and the dwellings of miners and managers. The evolution of mining technology innovations can be traced by the scars left behind as well as "cultural material" (Beak, 1992)

H. Water availability

There are no perennial springs east of Bodie town site, within the Bodie Bowl. The Bodie town site is served by two 30,000 gallon covered cisterns and two 20,000 gallon ponds. These

cisterns and ponds are situated in the saddle between Standard Hill and Silver Hill. Water is piped to this site from the headwaters of Rough Creek about five miles to the northwest.

Five wells were developed by BCMC. As a result of drilling these water wells, BCMC concluded that there is a regional aquifer developed within fractured dacite (Beak, 1992, p. 4-41). The water surface ranges between the elevation of 8,124 and 8,130. One well north of the mill tailings produced 150 gpm, another well south of the tailings produced 250 gpm. On Bodie Bluff and Standard Hill, the water table is between 600 and 700 feet below the surface. The wells drilled by BCMC are not currently being used. We estimate total water availability in excess of 400 gpm. This value will be used in our evaluation of the feasibility to process ores in an area immediately east of the Bodie Bowl. This volume is sufficient to meet proposed mining and milling requirements.

I. Power availability

Bodie Historical State Park is served by Continental Telephone Company, and Southern California Edison. A high voltage power line (40 kilovolts ?) crosses Bodie Bowl from Sugarloaf and Queen Bee Hill on the south, and continues northeast via Taylor Gulch. There is sufficient power available to meet mining needs

J. Recreation

Bodie State Historic Park is in the center of the Bodie Bowl and receives about 200,000 - visitors a year. Current California State Park estimates are that these visitors contribute $12 million entering the local economy each year.

K. Air Quality and Noise

Standards for air quality are regulated in Mono County by the Planning Department. The Bodie Bowl is under a general air quality management guideline which permits mining activities under approved plans of operations. Noise mitigation requirements are also administered by the Mono County Planning Department under their General Plan. By performing blasting, excavation and transportation of material from the mine area at selected times and on selected days, (when Park visitors are at a minimum) these effects could be mitigated so as not to create a nuisance under 36 CFR 9A.

L. Visual Impacts.

Mining at Bodie would proceed using standard industry practices for open pit mining. Under our development scenario, there would be 4 pits that encompass a total of about 87 acres. The excavations would be partly visible from the State Park. A visual impact analysis of the project was made in (EDAW, 1991). The visual impacts that our development scenario would create are less than those described by the EDAW report, which was commissioned by Galactic. We believe that the visual impacts of our mine model to be permissible under the provisions of 36 CFR 9A.

GEOLOGIC SETTING

A. Regional Geology of the Western Basin and Range

The Bodie Mining District is on the western edge of the Basin and Range physiographic province and within the Walker Lane tectonic lineament. To the south of Bodie is Mono Basin and the Mono Craters volcanic chain. The most recent volcanic eruptions in the Mono region occurred at Paoha and Negit islands between 680 and 100 years before present. A sub-lacustral volcanic explosion occurred at Mono Lake in 1890 (Hall, 1983, p. 43). In this region, a variety of Tertiary volcanic extrusive rocks lie atop Cretaceous granite plutons and older metasedimentary rocks.

B. Mining History of the Region

Some of the gold and silver mines within the Basin and Range portion of California and adjoining Nevada include Masonic, Aurora, Borealis, Candelaria, and Silver Peak.

C. Regional Geology of the Bodie Hills

The regional geology of the Bodie area is depicted in **Maps** 7 (Al-Rawi, 1969). The published report by Chesterman and Gray (1975) was also used in this investigation.

The Bodie Hills lie east of U.S. Highway 395, and California Route 182 as far north as the East Walker River; extends south to California Route 167 - on the north shore of Mono Lake; and extends about 10 miles into Nevada to include the site of Aurora and Mount Hicks. The Bodie Hills are underlain by two suites of volcanic rocks. The older (Oligocene and Miocene) suite of rocks is high potassium calc-alkalic, while the younger (Pliocene and Pleistocene) is alkali-calcic. Chemically the rocks range from rhyolite to basalt. The rocks which underlie Bodie are part of the calc-alkaline suite. Kleinhampl, et. al., (1975) further subdivided these rocks into six descriptive units on the basis of age, location and dominant chemical composition. Stewart et. al. (1982) in the geologic compilation of the Walker Lake 1° by 2° Sheet generally followed Kleinhampl et. al., (1975).

The units of Kleinhampl et. al. (1975) are as follows from oldest to youngest:

Unit 1

This unit contains andesite and dacite flows, intrusive bodies and breccias (mostly lahars). The unit also includes rhyolite flows and associated intrusive bodies. The rhyolite and intrusives generally form the northeast edge of the Bodie Hills and extend from Masonic on the northwest to Aurora on the southeast. At Aurora these rocks are 13.5 to 15.4 million years (m.y.). old.

Unit 2

This unit has been described by Kleinhampl et. al (1975) as trachyandesitic welded tuff, correlated by Stewart et. al. (1982) with the Stanislaus Group and described as latite flows and quartz latite ash-flow tuffs. This unit is of limited areal extent, it forms a discontinuous 10 mile long northwest trending series of outcrops which lies about four miles east of Bodie, and another

outcrop of about six square miles which lies between Bridgeport reservoir on the southwest nearly to the site of Masonic (in the Masonic Mining District), 10 miles to the northeast. These rocks are 9 -10 m.y. old.

Unit 3

This unit which underlies the Bodie Mining District covers about 31 square miles and represents approximately 8.4 cubic miles of rock. Bodie lies near the eastern margin of this volcanic field. The unit makes up the southwest portion of the Bodie Hills, and includes flows and breccia (mostly lahars). It primarily consists of andesite, dacite and related rocks of intermediate composition, but also includes rhyolite. Chesterman (1968) divided this sequence of volcanic rocks into five formations, each of which has a limited areal extent and it own eruptive center. The Bodie Mining District is one of several felsic Miocene volcanic centers within the Bodie Hills. The volcanic rocks range in age from 9.5 million years (m.y.) to 8 m.y.

Chesterman (1968) recognized three principal volcanic sequences within Kleinhampl's Unit 3 at Bodie Bowl. The youngest of these sequences is the Potato Peak formation. This formation lies east and north of the elongate ridge which makes up the Bodie Mining District. The Potato Peak formation consists of interlayered dacite flows and layers of tuff breccia. There are also plugs and dikes of rhyolite in the vicinity of Potato Peak. The Murphy Spring tuff breccia, the next oldest formation, is found on the south and east margin of the Bodie Mining District. It consists principally of pyroclastic rocks, but also contains flows and intrusive bodies of dacite, rhyolite, and basalt.

The oldest sequence, and the one which hosts gold-silver mineralization in the Bodie Mining District, is the Silver Hill volcanic series (Chesterman, et. al. 1986, p. 3). The Silver Hill volcanic series is a sequence of dacite, latite, and trachyte flows, tuff breccia, and small plugs of hornblende dacite. Hollister and Silberman (1995, p. 130) describe the Silver Hill volcanic series as, "...an irregular, faulted, north-trending anticline formed by doming of the extrusive volcanic rocks by intrusions that now occupy vents from which the flows and pyroclastic rocks were erupted."

Unit 4

This unit consists of andesitic and dacitic flows, domes and minor tuffs. It outcrops in the southeast portion of the Bodie Hills, about four miles south of Aurora and a similar distance east of Bodie. These rocks are approximately 2 - 4 m.y. old.

Unit 5

Unit five as defined by Kleinhampl et. al. (1975) does not occur within the Bodie Hills. It consists of olivine basalt from 2.5 to 4.5 m.y. old and is found in the Anchorite Hills east of Mono Lake.

Unit 6

This Quaternary unit includes olivine-bearing basalt, several thousand years to about 3 m.y old, and some rhyolite which are about 3.5 m.y old. The unit occurs principally east of Aurora, but also wraps around Aurora on the north and west.

D. Bodie Hills Volcanic Centers

Within the volcanic rocks of the Bodie Hills, Kleinhampl et. al. (1975) identified or postulated nine broad volcanic centers. Within these centers they identified 72 vents of rhyolitic to dacitic composition and 19 vents of basaltic to andesitic composition. In addition they mapped 9 areas of dikes or closely spaced plugs, without reference to composition. At Bodie they essentially reproduced the work of Chesterman et al. (1986, Plate 1). Bodie, Aurora, and Masonic, three areas of gold mineralization, are broad volcanic centers which were identified.

SITE GEOLOGY

A. Introduction

There have been different interpretations of the geology at Bodie. Most researchers have concluded that gold and silver bearing quartz veins are associated with intrusive volcanic rock (Herrera, Silberman and Closs, 1990; Silberman and Hollister, 1995). However, McCluskey (1947) and Gumble et. al (1991), who was a project geologist employed by BCMC, interpreted the geology as a series of volcanic flows.

The various interpretations of the igneous stratigraphy for the Bodie mining district are summarized and compared with each other in **Table 3**.

According to Gumble (1991), gold in the Bodie Bluff-Standard Hill area is hosted by three volcanic flows which, from highest to lowest, consist of (1) dacite-latite, (2) trachyandesite and (3) trachyte flow (see geologic sketch map in **Figure 3** and cross section in **Figure 4**). The upper-most dacite-latite flow is at least 200 feet thick and contains minor zones of andesite, quartz latite and trachyte. An approximately 10 foot thick rhyolitic lithic tuff is discontinuously present at the base of the overlying dacite-latite. On Bodie Bluff, gold bearing veins occur principally above the rhyolitic tuff at the base of the upper dacite-latite flow. There is relatively little variation in the thickness or grade of gold mineralization here. Below this, Kleinhampl and others (1975) identified a 300 foot thick trachyandesite flow. At the base of the trachyandesite flow is a distinct trachytic lithic tuff that varies from 10 to 50 feet in thickness.

Subsequent examinations by Amax geologists have also concluded the volcanic rocks underlying Bodie Bluff and Standard hill are flows, not intrusions. This conclusion is based on the geometry of the underlying tuff breccia which is uniformly flat (or only slightly tilted), without the downward high-angle intrusive contact that would be expected if the Dacite of Bodie Bluff was a plug. They combined the two upper units of Gumble (1991) [i.e. the dacite-late, and trachyandesite], into a single unit. This single unit they describe as a dacite porphyry, medium to light grey, abundantly porphyritic, with 20 percent hornblende and lesser biotite, 20 percent plagioclase and orthoclase and rare quartz. Phenocrysts occur as euhedral crystals 0.04 to 0.08 inches in size, set in an aphanitic groundmass. Sparse large blocky plagioclase phenocrysts 0.12 to 0.16 inches in size are distinctive.

Table 3
Igneous Stratigraphy of the Bodie Mining District

Bodie Mining District Chesterman, et. al. (1986)	North of Mono Fault Galactic (ca. 1988)	North Bodie Bluff Herrera (1988)	Bodie Mining District Nerco (1984)	North of Mono Fault Amax (1989)
SILVER HILL VOLCANIC SERIES Tsdi: Dacite plugs	Tdf: Dacite latite flow	Tdi: Hornblende dacite intrusive plug of Bodie Bluff	bbd: Bodie Bluff Hornblende dacite	
	Ttf: Tracyte flow (East Bodie Bluff) Ttaf: Tracyandesite flow (south of Tioga Fault & east of Standard Vein)	Ttf: Biotite-tracyte pyroclastic flows	qbd: Queen Bee dacite ebbdb: East Bodie Bluff dacite breccia	
Tuff breccia Tsd(A): Hornblende rich dacite composite flows	Tdf: Dacite/latite flow (north of Mono Fault & south of Tioga Fault).	Tdf: Biotite-hornblende dacite pyroclastic flows	Shhd: Silver Hill hornblende dacite flows	Tdl: Dacite-latite flows.
Tsd(B): Biotite-rich dacite composite flows	Ttaf: Tracyandesite flow (south of Mono Fault)		SHbd: silver Hill biotite dacite flows SHdb: silver Hill dacite breccia SHdi: Silver Hill dacite intrusive	
Tsd: Tuff breccia	Ttaf: Tracyandesite flow Tsb: Sandy Breccia Tbb: Boulder Breccia Tstf: Syndicate tracyte flow	Te: Epiclastic deposits Tsb: Explosion-fallback breccias Tmb: Mineral breccias (related to quartz-adularia veins) Tpb: Pre-mineral breccias	SHdt: Silver Hill dacite and tuff breccia SHdb: Silver Hill dacite breccia	Qtoa: Alluvium Tbb: Breccia Tst: Syndicate Tuff

The underlying trachyte of Gumble (1991), was described by AMAX as a lithic tuff. It is present at an elevation of approximately 8,300 feet. The rock is grey to green-grey in drill cuttings and exhibits a fine-grained, non-porphyritic texture. It contains lithic fragments, sparse flattened pumice shards, and small indistinct phenocrysts of sanidine and biotite, in a finely granular groundmass.

Our field work found evidence of both volcanic flows and intrusions. While we concur that the dacite of Bodie Bluff is an intrusive, we believe that is the remnant of a sill, not a plug. It has composite flows and tuff breccias below it, and the East Bodie Bluff trachyte formerly covered it, but has been removed by erosion.

Based on K-Ar age determinations, hydrothermal activity commenced at the end of or immediately after volcanism, and continued for about 1.5 million years. Fluid inclusion studies have determined that mineralization and alteration were produced by fluids of meteoric origin, heated to temperatures between 215° Celsius and 245° Celsius with salinities of less than 0.5 percent equivalent NaCl. The fluids are similar to currently active geothermal fluids in the Bodie Hills area.

B. Structure and Vein Mineralogy

The Bodie Mining District, which extends from Bodie Bluff to Queen Bee Hill on the south, can be divided into three mineralogically distinct parts. Chesterman et. al. (1986) refers to the these parts as the Northern mines, Middle mines and Southern Mines. Generally following Chesterman et. al. (1986), and Hollister and Silberman (1995a, 1995b), we will refer to these parts as the northern, central and southern Bodie mining district (Figure 3).

1. Northern Bodie Mining District

The topographic saddle immediately south of Standard Hill is cut by the east-west trending strike-slip Mono fault. There has been as much as 200 feet of vertical displacement on this fault, with the south side being the up-thrown side. The nature of veining, mineral assemblages and degree of alteration changes dramatically across Mono fault, which separates the northern Bodie mining district from the central Bodie mining district.

Historically, gold-silver bonanza ore was mined in the northern third of the district, north of the Mono fault. It is also the site that Homestake, Nerco, Galactic and Amax were exploring in the 1980s to determine the presence of an economically viable gold deposit. For these reasons recent geologic investigations concentrate on this area. Although Homestake and Nerco did conduct geochemical surveys in the central and southern portions of the district, no economically encouraging results were obtained.

North of the Mono fault, rocks have been subjected to low-temperature potassium-silicate alteration and silicification. Argillic alteration typifies rocks south of the Mono Fault. Deep oxidation north of the Mono fault along the veins has produced a supergene argillic alteration that is indistinct from the pervasive argilization south of Standard Hill. Alteration is less developed south of the Mono Fault.

The bonanza ore mined in the 1880s was found in the area between the Moyle, Standard Vein, Tioga and Mono faults - the structural center of the district (Chesterman et al., 1986). The bonanza zone yielded more than 633,000 ounces of gold and as much as 800,000 ounces of silver from about 380,000 tons of ore (Chesterman, et. al., 1986, p. 12, 33).

A graben has formed along the axis of alteration and veining, just east of the highest parts of Bodie Bluff and Standard Hill. The graben is defined on the west by the Moyle fault and on the east by the Standard Vein fault. These faults are intersected by the east-west trending Tioga fault which occupies the topographic low between Bodie Bluff and Standard Hill. The Moyle fault is just east of the highest elevations on Bodie Bluff and Standard Hill. The distance between the two faults on Bodie Bluff is 600 feet at Standard Hill it is 1,100 feet. There is an apparent down drop of only about 50 feet within the graben. This area later experienced doming due to volcanic intrusions. Rock within the graben contain silicified breccia with fragments of veins and blocks of sinter. Some boulders of sinter contain fossil reeds. The presence of sinter blocks in breccia is evidence that the paleo-surface was only a few hundred feet above the present surface. The roots of the sinter zones were repeatedly brecciated and silicified, however only their contacts are actually veins. The roots of the sinter is identifiable down to the trachytic lithic tuff.

To the north of the Mono fault adularia is an important component of the veins. Wall rocks also contain significant replacement adularia. Total dilation of the rock mass by vein filling during mineralization represents about 10 percent of the rock volume.

a. Bodie Bluff and Standard Hill In Cross Section

Herrera, Closs and Silberman (1993) have summarized alteration and geochemical zoning seen at Bodie Bluff (Figures 3 and 4, Herrera, 1988, Plate III). At upper-most elevations on Bodie Bluff, near 9,000 feet, is a stockwork of 5 to 8 inches wide, oxidized, discontinuous gold- and silver-bearing, chalcedonic-banded quartz and adularia veins. This upper zone of low-temperature (240° Celsius) alteration affects all rock types on Bodie Bluff and Standard Hill. This zone grades downward to unoxidized potassium-silicate altered rocks. Propylitic alteration is present at greater depths and is peripheral to the zone of formerly economic gold mineralization.

Below this on Bodie Bluff and Standard Hill, at an elevation of about 8,700 feet, the veins are fine grained, vuggy, banded and sheeted, contain iron oxides along partings, and have relict lamellar calcite texture. This is the upper part of the bonanza gold-silver zone. Veins can be 3 feet wide, and contain adularia crystals up to 1 inch which coat fracture surfaces and partings in the vein. The bonanza vein system formed initially along the north-northeast trending faults, which were the site of minor calcite deposition. The calcite was replaced by silica that accompanied adularia and electrum in a weakly alkaline, low sulfur hydrothermal system. Deposition resulted in alternating bands of quartz and adularia in the faults (Gumble et. al. 1991, 662).

On Bodie Bluff at an elevation of 8,400 feet, which is below the main gold-silver bonanza zone, the veins are thinner and coarser than at higher elevations. Ore forming minerals include gold, silver, argentite, pyrite and sphalerite. Sulfide percentage is usually low. Manganese oxides, clay minerals, and hematite occur in some veins.

East of Standard Hill, below the trachytic lithic tuff, veins are narrow, they average about six inches wide, but contain relatively high grade gold mineralization. These veins are widely spaced and there are few small veins between them. According to Gumble et. al (1991, p. 622) most of the gold mineralization discovered by Galactic's exploratory drilling, occurs in the middle trachyandesite flow where veins are common, and average about two and one-half feet wide. There are numerous small interstitial veins mineralized with gold. The highest grade gold tends to occur immediately above the trachytic lithic tuff and gold grades decrease downward toward the upper contact of the middle flow. According to Herrera (1996) this drilling program discovered 1 million

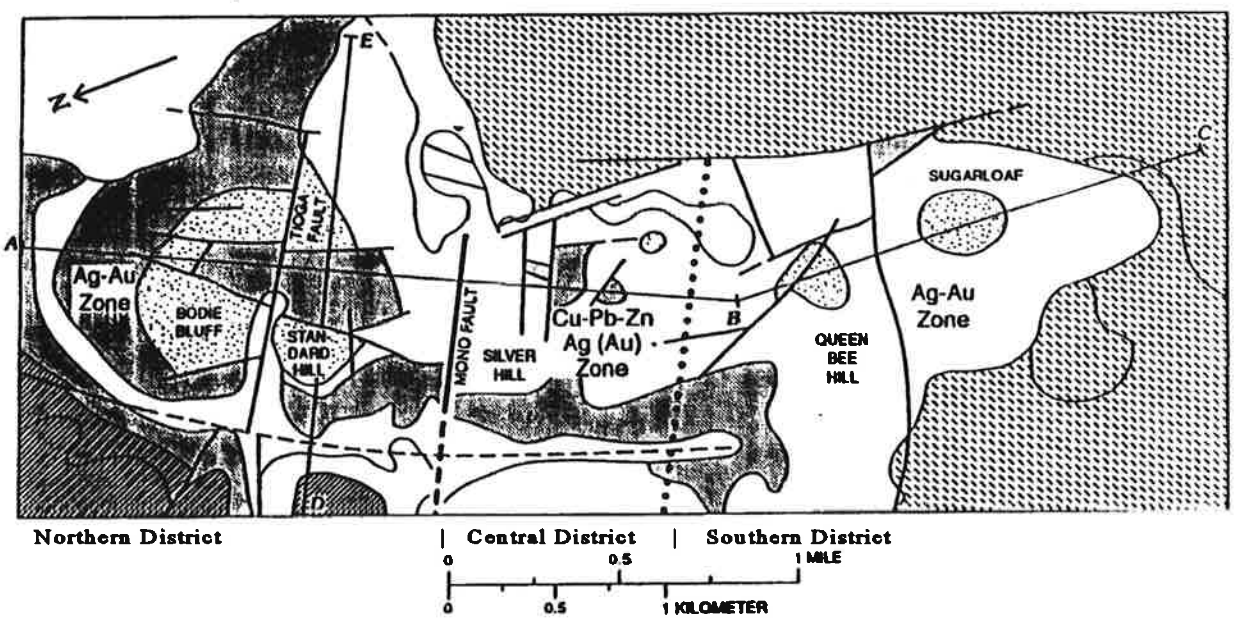


Figure 3. Geologic sketch map of Bodie Bluff and Standard Hill. Adapted from Hollister and Silberman (1995).

ounces of gold under East Bodie Bluff. Many of the smaller veins pinch out before reaching the present surface. The trachytic lithic tuff, and a breccia dike spatially associated with the north-northeast trending faults, were partially replaced by silica borne by the hydrothermal fluids responsible for bonanza gold mineralization. The breccia dike, historically known as the Fortuna Vein, and the trachytic lithic tuff are mineralized with base metals, silver and gold.

b. Other Areas within the Northern Bodie Mining District

Geochemical sampling by Homestake delineated an area with anomalous gold values northeast of East Bodie Bluff (**Map 8**). Hydrothermal alteration is strong, but less intense than over the Bodie Bluff and Standard Hill. The frequency of occurrence of quartz veins increases to the east. Channel sample assays collected by Homestake and Nerco ranged from a trace to 0.40 oz/ton (Amax, 1996).

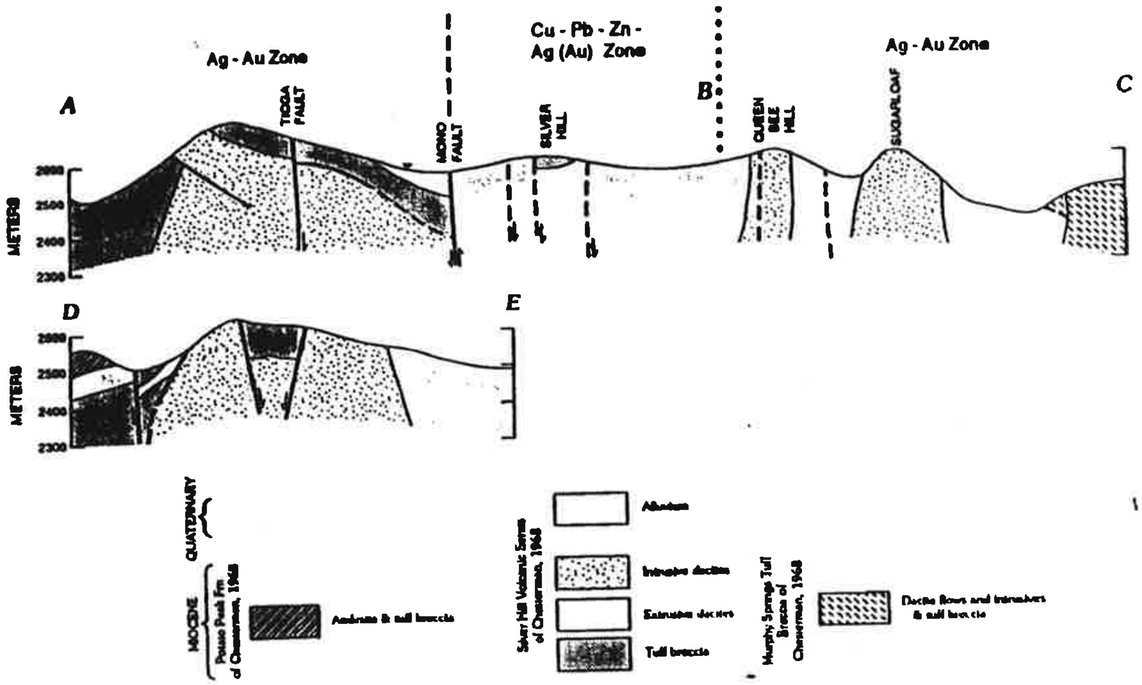


Figure 4. Geologic cross section of Bodie Bluff. Adapted from Hollister and Silberman (1995).

A second anomalous area lies about 1,000 feet southeast of the East Bodie Bluff anomaly, just east of the east side line of the patented Sunshine claim, about 2,600 feet east of Standard Hill. In this area there are sparse quartz veins. Hydrothermal alteration and brecciation occur in a rhyolite tuff. Sample assays range from a trace to 0.10 oz/ton gold.

An area known as the Maybelle zone is located on a low ridge about 2,000 feet southeast of the East Bodie Bluff anomaly. Nerco collected 21 samples the area in 1984. Out of these, seven samples were anomalous in gold; ranging from 0.01 to 0.15 oz/ton gold. In 1986 Homestake collected 63 channel samples from the east adit. Four samples contained over 0.01 oz/ton gold. Three widely-spaced reverse circulation holes were drilled with disappointing results. Few five-foot sample intervals were above the 0.002 oz/ton detection limit.

2. Central Bodie Mining District

The Central part of the district lies south of the Mono Fault and north of the Noonday Consolidated Shaft, approximated by the east-west section line between Sections 16 and 21.

Within this topographically low central third of the mining district, a deeper structural level of the volcanic complex is exposed. Veins here are a series of polymetallic silver-rich veins of brecciated, silicified, quartz-cemented wall rock, whose base-metal-rich mineral assemblage

includes galena, sphalerite, chalcopyrite, tetrahedrite, stephanite, pyrite, and pyrargyrite. Copper, lead and zinc can exceed two weight percent, silver 64 oz/ton, and gold 0.50 Oz/ton Due to the presence of base metals, and other lines of evidence, Silberman and Hollister (1995, p. A73) have recently postulated the presence of a porphyry copper-molybdenum system at depth. While not directly an issue for this report, in areas open for mineral development, such anomalies might be considered a target for deep exploratory drilling.

At Silver Hill, mine dumps from deep workings contain abundant polymetallic sulfide-rich material, however surface exposures of quartz veins and waste dumps from shallow workings resemble the sulphide poor mineralization north of the Mono fault. In addition placer gold is present east of Silver Hill. Hollister and Silberman (1995) have drawn the comparison between deep polymetallic silver-rich veins in association with shallow silver-gold veins to well established epithermal mineral deposit models. Polymetallic silver-gold veins at depth associated with epithermal silver-gold veins higher in the hydrothermal system are frequently found in a zonal relationship to porphyry copper-molybdenum systems.

In 1984 Nerco extensively sampled eight mine dumps on Silver Hill. Samples ranged from 0.002 to 0.023 oz/ton gold. Homestake drilled a few widely-spaced holes on Silver Hill, with disappointing results.

3. Southern Bodie Mining District

According to Silberman (personal communication, 1996) the mineralization differences between the central and southern portion of the mining district is gradational. Mineralization in the southern part of the mining district resembles the northern part of the district, however gold values are much lower. The boundary between the central and southern part of the district lies immediately south of the Noonday-Combination mine shaft. The Noonday-Combination mine shaft on the southwest slope of Silver Hill contains polymetallic veins characteristic of the central part of the mining district. Chesterman, et. al. (1986, p. 29-31) indicates that a characteristic feature of the veins in the Southern mines is the relationship between silver, gold and quartz. Those veins that had the highest quartz content had the highest content in silver and gold. Mineralization extends at least 800 feet below the surface. Below this, veins consist almost entirely of calcite with occasional small, irregular pseudomorphs of quartz after calcite.

In 1984 Nerco sampled the Sugarloaf area. They noted quartz veins, argillization and local silicification, however gold values were quite low.

4. Central and Southern areas in Summary

Dilation of the rock mass appears to be less than 5 percent. Veins consist of brecciated, silicified dacite, cemented by fine- to coarse-grained quartz, sulfides, and sulfosalts. Ore forming minerals include pyrite, galena, chalcopyrite, tetrahedrite, sphalerite, stephanite and pyrargyrite. This complex mineralogy is not found north of the Mono fault. The main ore mineral north of the Mono Fault is native gold with some localized silver sulfides.

South of the Mono Fault, there is a central axis of argillic alteration with small zones of sericitic and silicic alteration which extends to Sugarloaf. The rocks are propylitized peripheral to the central zone of argillization. In both the Northern and Central areas the scarcity of opal and the presence of sulfates within the clays are not consistent with hot-spring argillization in either area. K-Ar ages of the vein systems north and south of the Mono fault overlap in age. Hollister and

Silberman (1995b) believe they represent different parts of a single hydrothermal mineralization episode.

C. Hydrothermal Alteration Zoning

Hydrothermal alteration is zoned both laterally and vertically within the mining district. The alteration forms a linear northeast trending axis which is present from just east of Bodie Bluff to Sugarloaf. This alteration was mapped in general by Al-Rawi (1969) and Kleinhampl et. al. (1975) and in detail by Chesterman et. al. (1986) and Herrera (1982, 1988). The hydrothermally altered area exceeds 3.5 square miles and is centered along the axis of the district along which several small plugs have intruded. The zones of mineral alteration associated with historic mine development in the Bodie Bowl covers an area of 1,570 acres. Of these, 1,523 acres are inside the Bodie Bowl and 47 acres are outside of it.

As mapped by Al-Rawi (1969) the area of hydrothermal alteration includes the area east of the Cottonwood Canyon Road and south of the Aurora Road nearly as far east as the old stone toll house in Section 10. The altered area is west of the andesite plug in the southeast quarter of Section 10 and northeast quarter of section 15, just includes the Red Cloud mine, passes through the saddle east of Queen Bee Hill, and includes most of Sugarloaf (**Map 8**). Chesterman et al (1986) depicts geology and alteration both plan-view and cross section. Herrera (1988, Plate III) correlated alteration patterns on Bodie Bluff and Standard Hill with trace element mineralization patterns. Herrera mapped and sampled all open underground mine workings on Bodie Bluff, and had access to a limited amount of drill core. Al-Rawi (1969) mapped and classified rocks in the region as altered and unaltered without regard to details of alteration type.

Chesterman et al (1989) identified the following sequence of alteration at Bodie: 1) early propylitic, 2) argillic, 3) potassic, 4) late silicification. However, Amax (1989), Herrera et. al. (1993), Nerco (1984) and Gumble et al. (1991) interpret the following sequence of alteration: 1) early propylitic, 2) potassic, 3) argillic, 4) hydrothermal brecciation (see **Table 4**). Amax interprets the silicification as a late-stage, high-temperature phase of potassic alteration.

There is no consistent pattern between alteration and mineralization. Most of the high-grade gold mineralization occurred in veins with a variety of wall-rock alteration conditions. Potassic, sericitic-pyritic and silicic alteration envelopes are associated with most (but not all) mineralized blocks. No gold mineralization has ever been observed at Bodie that was not associated with some type of hydrothermal alteration. The authors know of no formerly productive mines outside of the area of hydrothermal alteration as depicted by Al-Rawi (1969).

D. Lode Mineralization

There are three types of mineralization at Bodie: 1) high-grade mineralization in quartz-adularia veins, 2) disseminated low-grade mineralization associated with densely-spaced quartz veinlets and stockworks, and 3) Low-grade disseminated mineralization associated with flow breccias. All three types are always associated with some type of wall-rock alteration (see discussion above).

1. High-Grade Quartz-Adularia Veins

Quartz-adularia veins carrying high grades of gold were the principal source of gold from 1861 to about 1925. Historic descriptions of these veins indicate that there were some massive gold occurrences in the veins. Average gold grades were .20 oz/ton (Chesterman and Grey, 1986)

2. Low-Grade Vein-Stockworks

These deposits are illustrated by the geology and mineralogy of the Rose Clip Quarry. Here

Stockworks quartz-adularia mineralization in the Roseclip Pit, Standard Hill, Bodie mining district.

several smaller veins and veinlets combine to make a "Bonanza Ore Zone" (Herrera, 1988, Plate 1). These occur both at Bodie Bluff and Standard Hill. They are not known south of the Mono Fault (. Silberman, Herrera, and Sweeney, 1995). The average gold grade of this zone is reported to be between .035 and 0.09 oz/ton (Herrera, 1988; McClusky, 1935, Table 7 of this report).

3. Low Grade Hydrothermal Breccias

These mineralized breccias are relatively small, and not easy to distinguish in the field from unmineralized pre- and post-mineralization breccias. Gold occurs as disseminations with silica in the breccia matrix. There is hematite-quartz-adularia overprinting of earlier pre-mineral hematite and manganese breccias. They include the "Boulder Breccia" of the central graben on Bodie Bluff-

Standard hill and also include hydrothermal hematite breccias of East Bodie Bluff..Gold grades range from 0.0 to 0.04 oz/ton (Gordon and Silberman, 1995).

4. Composite Description of Mineralization

Since 1935, exploration efforts at Bodie have concentrated on the disseminated gold mineralization in the alteration haloes surrounding the high-grade quartz veins. This viewpoint on the geology and mineralization at Bodie has been summarized in a recent paper by Hollister and Silberman (1995):

> "Gold mineralization and associated alteration are most pronounced in the northern part of the mining district. Topographically, this area is known as Standard Hill and Bodie Bluff. The west boundary of the mineralized-altered zone is well exposed on these two hills and is unusually abrupt. Farther south, two more hills (Silver Hill and Queen Bee Hill) account for the rest of the mining district. They are presently assigned a low exploration priority...
>
> The Bodie mining district in Mono County, California, is zoned with a core polymetallic-quartz vein system and silver- and gold-bearing quartz-adularia veins north and south of the core. The veins formed as a result of repeated normal faulting during doming shortly after extrusion of felsic flows and tuffs, and the magmatic-hydrothermal event [which] seems to span at least 2 ma.
>
> Epithermal mineralization accompanied repeated movement of the normal faults, resulting in vein development in the planes of the faults. The veins occur in a very large area of argillic alteration. Individual mineralized structures commonly formed new fracture planes during separate fault movements, with resulting broad zones of veinletes growing in the walls of the major vein-faults. The veinlet swarms have been found to constitute a target estimated at 75,000,000 tons, averaging 0.037 ounce gold per ton. The target is amenable to bulk-mining exploitation.
>
> The epithermal mineralogy is simple, with electrum being the most important precious metal mineral. The host veins are typical low-sulfide banded epithermal quartz and adularia structures that filled voids created by the faulting. Historical data show that beneficiation of the simple vein mineralogy is very efficient."

According to Gumble (1986-1992) and Amax (see Wolverson and Laskowsiki, 1989), most gold mineralization is associated with the middle trachyandesite flow (see geologic sketch map in **Figure 3** and cross section in **Figure 4**). In addition, the trachyandesite flow is more extensively faulted (brecciated?) than adjacent flows, and was probably more permeable during later hydrothermal activity.

Table 4
Wall Rock Alteration of the Bodie Mining District
(Oldest to Youngest Phase)

Bodie Mining District Chesterman, et. al. (1986)	Bodie Mining District Nerco (1984)	North Bodie Bluff Herrera (1988)	North of Mono Fault Gumble et. al (1991)	Bodie Mining District Amax (1989)
1. Propylitic Green, with chlorite, sericite, epidote, quarts, pyrite, hematite.	**1. Propylitic** Chloritized mafics, epidote, sericite, quartz	**1. Propylitic-Illitic** Illite, hematite, calcite, heulandite, quartz, minor calcite, kaolite, local pyrite	**1. Regional Propylitic** **2. Local Illitic** Quartz, illite, pyrite, minor Au.	**1. Propylitic-Illitic** Propylitic grades upward to illitic; propylitic generally below 8400 ft.
		2. Pre Mineral Breccias Hematite-quartz matrix breccias.	**3. Boiling** Au deposition, sinter formation, later Au redistribution and concentration at lithic contacts and crosscutting quartz veins.	
2. Argillic Quartz, Chalcedonic and opaline silica, montmorillonite, kaolinite, limited carbonate and pyrite.	**2. Argillic** Soft plagioclase and tan mafics, Altered rocks are soft and friable.	**2a. Oxidized K-Silicate** Upper parts of Bodie Bluff & Standard Hill; quartz, adularia, limonite, sericite, kaolinite with stockwork of chalcedonic and Au-Ag veins. **2b. Manganese-Potassic** Manganese Oxides plus silica and K-feldspar **2c. Unoxidized K-Silicate** Quartz, adularia, minor illite, local pyrite.	**5. Sericitic** Quartz-sericite-pyrite on North Bodie Bluff and Western Standard Hill	**2. Potassic** Adds adularia feldspar and quartz; forms envelopes around ore bodies.
			6. Potassic	**3. Silicic** High-temperature silicification is quartz-rich phase of K-alteration
3. Potassic Confined to Bodie Bluff and Standard Hill, creates firmer rock type, bold outcrops, appears unaltered, adularia common in quartz veins with replacement of calcite.	**3. Potassic** Addition of potassium (K) as adularia and K-mica.	**3. Argillic** Along faults, fractures	**7. Argillic** Along faults, fractures	**3. Argillic** Late-stage, post mineral; distribution similar to K-alteration, confined to highly fractured ground,
4. Late Silicification Quartz veins and veinlets		**4. Hydrothermal Breccias** Quartz-adularia-hematite with K-silicate altered fragments, cut by quartz adularia veins.	**8. Hydrothermal Breccias** Oxidized, consists of clay, powdery country rock and minor silver-deficient vein material	
		5. Silicified Breccias		

MINERAL DEPOSIT MODELS

A. Introduction

Throughout this report we have referred to Bodie as a bonanza gold deposit. The subjective term "bonanza" is used to describe relatively small, high-grade deposits that have yielded large quantities of precious metals. These deposits have been sought by prospectors throughout history, and many present-day operating mines were developed as extensions of bonanza ore bodies. The Comstock of Virginia City, Nevada is one of the best known bonanza deposits. Silberman, in his 1972 Ph.D. thesis, compared chemistry and geology of Bodie with the Comstock. Cox and Singer in their 1986 U.S. Geological Survey Bulletin on Mineral Deposit Models (**Appendix 9**) outlined characteristics of these deposits which they referred to as "Epithermal gold (quartz-adularia) alkali-chloride type." Three other recent papers which outline the geochemistry at Bodie and further refine a ore deposit model include Silberman and Berger (1985), Herrera, Closs and Silberman (1993), and Romberger (1992). We accepted and used the U.S. Geological Survey model for this investigation.

B. Model Mineralogy

Bonanza precious metal deposits formed in near surface geothermal systems (above 3,200 feet below the surface) under low to moderate pressure and a temperature range between 50° and 300° Celsius. Silberman and Berger (1985) in their study of epithermal precious metal deposits propose five general deposit types: (1) low and (2) high sulfur "bonanza" vein and lode, and (3) low and (4) high sulfur hot springs silicified quartz stock works and (5) disseminated replacement. These researchers suggest Bodie exhibits characteristics of both the low sulfur hot springs and bonanza models. Bodie was mined for bonanza-type quartz veins. A characteristic of the hot spring environment found at Bodie is the broad, blanket-like zone of quartz-adularia alteration, accompanied by hydrothermal breccia and mineralized stockwork veining. Cox and Singer classify the Bodie mining district as being in the Comstock Epithermal Vein model of ore deposits (1986, p.121), and used grade and tonnage information from Bodie, and other deposits world-wide, to compile charts which show the range of grades and tonnages for this type of mineral deposit. The Cox and Singer (1985) "Comstock epithermal vein" model is reproduced in **Appendix 9**.

PRODUCTION HISTORY OF THE BODIE MINING DISTRICT

A. Overview

The Bodie mining district produced about 1.5 million ounces of gold and 7 million ounces of silver (Silberman and Hollister, 1995). The Standard Hill area was the source of more than 90 percent of the gold produced from the district. The mines at Silver Hill, in the southern part of the district probably account for most the remaining production; while production was small from mines in the central part of the district.

Discovered in 1859, the district went through 5 Boom-Bust cycles:

1859-1861 First Boom: Placers and Lodes on Bodie Bluff

1878-1882 Second Boom: Standard Mine, Bonanza Zone of Standard Hill

1890-1900 Third Boom: cyanide recovery of vein material (vat leaching)

1928-1931 Fourth Boom: Treadwell-Yukon (with Homestake) conduct over 18,000 feet of drifting at Red Cloud mine in search for Fortuna vein. Produced 3,600 tons, average grade of 1 oz/ton gold from 700 foot level.

1935-1945 Fifth Boom: Roseklip Mines - open cut mining of 55,000 tons of ore, average grade 0.0488 oz/ton gold. Cyanide used in a vat-leach mill circuit. The residue from this operation now lies in the large tailings pond in the east-central part of the Bode Bowl.

Exploration programs since WWII are:

1968-1969: American Smelting and Refining (ASARCO), 1968-1970. Underground and surface sampling and thirty nine holes drilled. Eleven drill holes encountered significant mineralization on the western edge of the Bodie graben.

1970-1974: Phelps Dodge. Underground sampling. Ten holes drilled in northern part of the district in area of earlier ASARCO drilling.

1976-1981: Homestake.

1982-1983: NERCO. Primarily geochemical survey and dump sampling in the Silver Hill area.

1984-1986: Homestake. From 1976 - 1985 drilled 23,040 feet, extensive surface sampling.

1988-1989: Galactic Resources Limited, 51,552 feet drilled.

1989: Amax Gold Inc., 6 holes, 3,650 feet drilled.

1992: Galactic Bankruptcy

Table 5
Drilling Programs in the Bodie Mining District

Dates	Company	Number of holes	Feet of Drilling
1968-1969	ASARCO	11	2,267
1970-1974	Phelps Dodge	10	4,722
1976-1981	Homestake	24	7,240
1985-1986	Homestake	39	15,800
1988-1989	Bodie Consolidated	44	51,552
1989	Amax	6	3,650
1990-1991	Galactic	6	1,250
Total		138	86,481 16.38 miles

B. Development Activity at the Bodie Mining District

Shallow gold placer deposits were discovered in the Bodie mining district in mid-summer 1859, followed later in the season with the discovery of gold-bearing quartz veins. The mining district was organized in 1860 (see Appendix 8), and serious mining began the following year. Rich ore discovered in the Standard mine in 1878 sparked a district-wide boom that lasted about four years. In the early 1890s electrical power was brought into the district, as was the new cyanide recovery process. A resurgence of production followed, but much of the activity was centered around the re-working of tailings and dumps. Almost as much gold was produced from this re-working as was initially recovered in the original stamp-amalgamation mills. Records of production prior to 1877 are essentially non-existent and data after that date are sketchy, but it is clear that the Bodie District is a major gold district. A best guess places the past production at about 1.25 million tons yielding 1.5 million ounces of gold and more than 7 million ounces of silver. Most of the ore was produced from a relatively thick sequence of shallow dipping veins known as the Bonanza Zone, from stopes up to 90 feet in vertical dimension. Bodie has the distinction of being the first mining district to use cyanide for gold recovery. Cyanide vat leaching of ores at the Standard Mill commenced in 1890 (Clark, 1970).

The Treadwell-Yukon Company conducted the first systematic examination of the Bodie mines. Between 1928 and 1931 some 18,000 feet of drifts and crosscuts were driven in the Noonday and Red Cloud mines in the attempt to locate a southern extension of the Fortuna vein. Simultaneously the company evaluated the Standard Hill area, in the northern part of the district. No scientifically systematic study is known to exist for workings in the central Bonanza Zone, which had been caved since the 1880s. In the evaluation of the northern part of the district, more than 10,000 samples were reportedly taken from surface and underground workings, covering 10,000 feet of crosscut and drifts. Based on this data, in 1945 it was estimated that potential existed for as much as 76 million tons of "marginal ore" with an approximate grade of 0.05 ounces of gold per ton and 0.75 ounces of silver per ton. This mineralization was thought to occur as parallel, sheeted stockworks of veins and local disseminations around and within the Bodie graben. The estimate included nearly 25 million tons remaining in the former principal production area between the Standard and New Bodie shafts. A pilot mill was constructed, and in order to confirm assay results, open pit mining was conducted and mine dumps we milled. This limited program reportedly was successful.

Roseklip Mines Company, organized by John Rosekranz and Henry Klipstein, constructed a mill and cyanide plant with a capacity of 500 ton per day. Between 1935 and 1942 the company processed 346,000 tons of dump material and 55,000 tons of material from the site of the Treadwell-Yukon open pit. They mined the pit using a mechanical shovel. Underground sampling by Treadwell had indicated that the ores in the area of the pit should average about 0.0494 ounces of gold per ton. The returns from the Roseklip Pit were reportedly 0.0488 ounces of gold per ton. We will retain this nomenclature ("Roseklip Pit") in this report to refer to the quarry operation dating from this time period on the southern slope of Standard Hill.

Sierra Mines Incorporated leased the mines in 1945, and proposed to continue operations to determine the existence of a large tonnage, low grade gold deposit on Standard Hill. However, in April 1946 the mill and cyanide plant were destroyed by fire and operations ceased. Shortly after this, in 1947, S. B. McClusky wrote a report for Sierra Mines evaluating the potential for a large tonnage deposit (at Standard Hill). It is probably McClusky's report that Clark (1976, p. 148) was

referring to when he stated, "Studies have been made to determine the feasibility of working the entire Standard Hill area as a large open-pit operation."

The American Smelting and Refining Company (ASARCO) carried on a brief, yet extensive program of surface and underground sampling in 1968, drilling 2,267 feet of holes. In 1970 Phelps Dodge began systematic surface and underground sampling program, and between 1972 and 1974 began core drilling, particularly in areas of limited previous mining activity. Phelps Dodge drilled a total of 4,722 feet of holes. **Table 5** summarizes drilling activity at Bodie.

Homestake Mining Company began an exploration program in the fall of 1976 which included surface mapping, sampling and drilling. Between 1976 and 1981, 7,240 feet was drilled.

In 1982 Homestake subleased the property to Nerco, a subsidiary of Pacific Power and Light. Their activities included surface trenching of mine dumps. Homestake took control again in 1984 (Beck, 1992, p. 4-12). Between 1985 and 1986 an additional 15,799 feet was drilled by Homestake. Both Homestake and Nerco outlined exploration targets, based on rock chips, dump, and underground sampling.

Also in the late 1980's a Florida-based investment company erected a small gravity mill at the Syndicate Millsite, northeast of Bodie Bluff, and ran tests on rock from the upper and lower Whitney tunnels and the Davis and Syndicate tunnels (Beak, 1992, 4-180).

In 1985, Bob Miller and others cleaned out the Whitney adit for metallurgical testing. The workings re-collapsed in 1991 (Bob Miller and William Boynton, verbal communication, 1994).

In August 1988, the Bodie Consolidated Mining Company, a subsidiary of Galactic Resources purchased the property from Homestake. Galactic, drilled a total of 51,552 feet between 1988 and 1991. In addition, between 25 and 65 trenches were dug (or re-excavated) to evaluate the property for placer gold potential. On May 25, 1989 M. Stephen Enders, Mark L. Whitehead, Gordon E. Gumble and Ray N. Warren completed a final report on the resource potential for Galactic. The evaluation began in December 1988 and consumed 20 work months. This evaluation considered 49,865 feet of drilling in 128 drill holes, and 10,000 channel samples from some 10,000 feet of underground workings. The underground samples were collected in 1928 by the Treadwell Yukon Company. They estimated the mineral resource as 34.19 million tons at an average grade of 0.036 ounces of gold per ton.

As early as Spring of 1989, Galactic attempted to sell an interest in the property at Bodie. On September 1, 1989 Amax Gold Inc. took a 6 month option on the property and began evaluating the property for possible purchase. Six confirmation reverse circulation holes were drilled totaling 3,650 feet. However, given the intense opposition to the mine proposal, and the unrealistic financial hurdles Robert Friedland of Galactic placed on the deal, Amax decided to drop the project.

In 1992 Galactic declared bankruptcy, as a result of a massive cyanide spill at the Summitville mine in Colorado (Wall Street Journal, December 3, 1992).

On the dates of field inspection (see below), no mining or milling activity was observed on any of the claims in the subject area.

C. Production

Separate production figures for each mine within the district were not found in the available historical literature or surviving government records. The most common citation for past production is about 1.25 million tons in which was recovered 1.5 million ounces of gold and more than 15 million ounces of silver.

CURRENT MINERAL EXPLORATION AND DEVELOPMENT WORK

No active exploration or mineral development is presently being conducted within the Bodie Bowl.

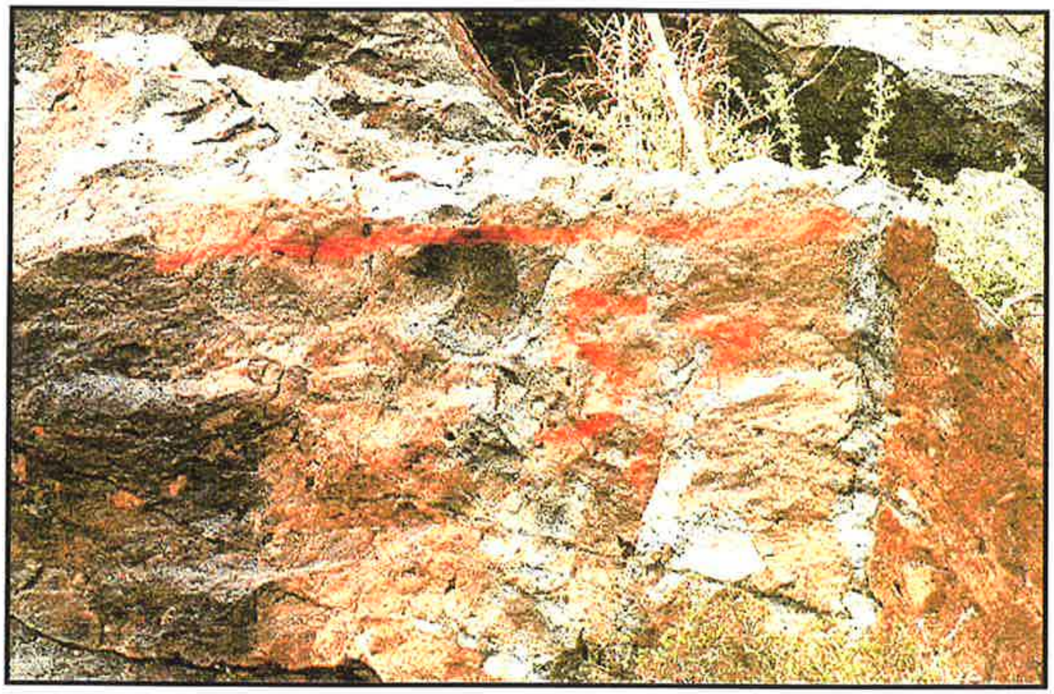
CURRENT MINING, MILLING AND RELATED OPERATIONS

No active mining, milling or related operations are presently being conducted within the Bodie Bowl.

FIELD WORK

A. Field Examination

Due to the heavy snowfall during the winter of 1994-1995, BLM field work did not begin work until mid-May 1995. Preliminary field inspections were made between May 15 and June 5,



Chip-channel sample BLM 57, east Bodie Bluff. Vertical chip-channel sample on the right side of this photograph is from an earlier sampling program conducted by industry. For sample site location, see Map13b.

1996. Between June 12 and 16, 1995, Miles "Bill" Silberman, recently retired from the US Geological Survey, conducted a week-long orientation to geology and mineralization at Bodie and the surrounding area. Silberman has studied the geology and mineralization of the area regularly since 1969. His 1972 Ph.D. thesis covered this area. The validity examination was conducted between May 1995 and November 1995. During this time, no mining activity was observed to be occurring on any of the claims herein identified as invalid. An inventory of mine workings (adits, shafts, deep pits, trenches, etc.) was made on most of the patented claims and on all of the

unpatented mining claims in the Bodie Bowl. This inventory is catalogued in **Appendix 10** and illustrated on **Map 9**.

The dates that one or more members of the validity team were at Bodie conducting field examinations are as follows:

May 15-19, 1995; May 22-26, 1995; May 30-June 2, 1995;
June 5-June 9, 1995; June 12-16, 1995; June 19-23, 1995; June 26-30, 1995;
July 5-7, 1995; July 10-14, 1995; July 17-21, 1995; July 24-28, 1995; July 31-August 4, 1995;
August 7-11, 1995; August 15-18, 1995; August 21-25, 1995; August 27-31, 1995;
Sept. 5-9, 1995; Sept. 20-23, 1995; Sept. 25-27, 1995;
Oct. 9-13, 1995; Oct. 16-20, 1995; Oct 22-26, 1995; Oct. 30-Nov 3, 1995;
Nov. 13-17, 1995; Oct. 15, 1996, Oct. 7, 15, 16, 17, 1997.

Field locations were made using U.S. Geologic survey topographic Maps and enlargements of aerial photographs. A topographic map of the Galactic Resources Project, covering the same area as the geologic map of Chesterman et al. (1986) at a scale of 500 feet to the inch (provided by claimant Bob Miller) was also used to locate positions of workings and sample locations. The locations of claims were taken from BLM mining claim records. County plat Maps were also used as were surveys of the properties made by the California State Parks and Recreation Department.

Only about 15% of the mining claim posts were found to be erect during our investigation. Although most were laying on the ground at their anticipated location. It is probable that many have been knocked down by range cattle. The locations of claim corners was determined by pacing and by tape-and-compass surveys. By our use of aerial photographs with a approximate scale of 1 inch = 200 feet, shafts, adits and other workings, and, mining claim boundaries could be approximated to within 25 feet, where survey markers were missing. Some linear features only 2 feet wide could be distinguished on the photos. A Global Positioning System was used to identify some mining claim corners, mineral survey markers, and section corners and quarter-corners.

Claimants were notified by certified mail of the commencement of this validity examination 30 days prior to the commencement date of May 15, 1995. Galactic's trustee (Robert Rusko), his representative in Bridgeport (John Langford, Bear Engineering) and Lost Carcass and Buzzard Mining Company's president (Bob Miller) were informed by phone of each field session and invited to attend or send a representative **(Appendix 6a and 6b)**.

During our investigation, we never had the benefit of any claimant showing us the discovery locations on any of the mining claims we evaluated in the field.

Claimants were present in the field with us on the following dates:

William Boynton met with Gregg Wilkerson and walked over the claims on Bodie Bluff and Standard Hill on June 15, 1995. As part of a county board of supervisor's field trip, Patricia Cain met with BLM geologists while we were performing placer testing on October 17, 1996.

PART II: ECONOMIC EVALUATION

OBSERVATION OF LODE MINING CLAIMS

All patented and unpatented claim blocks were inspected in the field and compared with topographic maps and aerial photographs to establish their locations. Maps and aerial photographs were supplied by the claimants and the operator's trustee. **Map 9** shows the locations of shafts, pits, trenches and other excavations which were examined. Descriptions of these sites are given in **Appendix 10.** Underground workings were also examined when documented to be safe to sample per Mining Safety and Health Administration (MSHA) and BLM requirements.

A. Location Maps

The mining companies had performed several different surveys of claim boundaries for the project. Discrepancies exist between these surveys as do discrepancies between the U.S. Geological Survey's 15-minute and 7.5-minute topographic maps. GIS technology was used to evaluate discrepancies between these various map data. We found differences as great as 200 feet in some cases, mainly in the southern part of the Bodie Bowl. There have been three independent surveys of Bodie State Park. These had discrepancies of up to 150 feet. Only 15% of the mining claim monuments were found to be in place. Many were on the ground near the places indicated for them on company maps and location documents. Many were missing. Within the accuracy of the 15-minute (1:62,500) map, we found the maps and location descriptions to closely approximate the actual position on the ground. Our evaluation of Galactic's field topographic maps suggest that they were produced from uncorrected aerial photographs. There were survey errors in the 1 inch = 400 ft maps of Chesterman et. al (1986) and these were incorporated in the maps of Herrera (1988) who used Chesterman's map as a base.

To collate all field data and to resolve discrepancies between maps, we plotted all data used in this analysis on a digitized 7.5-minute topographic map base. All information was reduced to a common coordinate system. That common coordinate system, found in Maps 1 to 19, form the basis of this report.

SAMPLING PROCEDURES AND ANALYTICAL WORK FOR LODE MINING CLAIMS

A. BLM Sampling Program

1. Sampling

Our sampling method was based on a stockworks model for ore body formation wherein there are high-grade gold bearing quartz veins and veinlets separated by gold-barren volcanic rock. To sample this type of mineral deposit, we concluded that 5 to 15 foot-long chip channel samples were required to assure accurate sample representation in our sampling process. An example of this sampling procedure is illustrated in the photograph, of BLM chip-channel Sample 57, below. Our team collected 108 surface samples and 38 underground samples (**Appendix 11A**). This represented approximately 1,280 feet of chip-channel sample for an average sample length of 12.6 feet per sample. In addition, we performed assays on sample splits of samples previously collected by Bill

Table 6 U.S. Bureau of Mines Sampling In the northeast part of Bodie Bowl				
Sample No.	**Sample Type**	**Dimension**	**Gold (ppb)**	**Description**
97	grab	random	6	Dump; basically grey to buff soil, no outcrop, unidentifiable, weathered volcanic rock.
98	chip	12"	<5	Pit; sheared contact zone between light colored trachyte and basalt. Sample includes both rock types.
113	grab	random	<5	Dump; gray dacite with small amount of felsic dike material included in sample.
114	grab	random	<5	Dump: similar to preceding sample.
115	grab	random	<5	Dump; similar to preceding sample
116	chip	48"	<5	Trench; flow breccia with clasts of different volcanic rocks, no vesicles, obsidian is abundant as clasts and lenses.
117	grab	random	<5	Dump; alluvial soil and rock derived from an angular, vesicular, volcanic ash flow. Probably abundant clay.
118	chip	24"	<5	Trench; latite or trachyte outcrop in middle of trench, small vugs, tabular crystals of black mineral, minor quartz.
119	grab	random	<14	Dump; similar to preceding sample.

C. U.S. Geological Survey Sampling Programs

The Geological Survey's principle researcher for the Bodie mining district was Dr. Miles ("Bill") Silberman. He provided our team with copies of all of the U.S.G.S. analytical results and also provided us with the U.S.G.S. research collection of rock specimens for the Bodie mining district. In addition he supplied cores of four exploration drill holes from Bodie Bluff that were included in Peter Herrera's Master's thesis (**Appendix 12**). Analytical results from U.S.G.S. samples are catalogued in **Appendix 11D.** They are plotted on **Map 12.**

D. Peter Herrera's Sampling Program

In addition to the core described above, Mr. Herrera supplied his original thesis maps, cross sections, notes, thin sections, underground maps, and other information not included in his thesis. He also spent 3 days in the field at Bodie with BLM staff. Analytical results from Hererra's thesis are catalogued in **Appendix 11C** and plotted on **Map 11.**

E. Mining Company Sampling Programs

We obtained confidential company records from Galactic Resources Inc., Lost Carcass and Buzzard Mining Company and from Amax. Catalogues of this information are provided in **Appendix 13, 14 and 15**. Included in the information supplied by Amax was a computer file of assays with **16,642** entries compiled from underground sampling and drilling. Additional drilling was conducted by Galactic after the Amax evaluation of 1992 and this data was added to the database by Larry Vredenburgh. A summary of the drilling programs conducted in the Bodie Bowl is given in **Table 5.**

ORE RESERVES

The data supplied to us by mining companies and published information about the Bodie mining district present a wide range of ore reserve estimates. These are cataloged in **Table 7.** Most of these estimates are based on careful hand-drawing of ore blocks. Homestake and Galactic geologists made a series of cross-sections through Bodie Bluff and Standard Hill with 50-to 100-foot spacings. They made horizontal sections through Bodie Bluff and Standard Hill with 100-foot thick slices.

A. Verification of Samples supplied by U.S.G.S and Peter Hererra

We sent selected duplicate samples of analysis made by the U.S. Geological Survey and Peter Herrera. Our analytical results were generally in agreement with those in the U.S.G.S-Herrera records. A comparison of assay results is provided in **Appendix 16B**. Most discrepancies may be due to difference in analytical method (Atomic Absorption Spectroscopy for U.S.G.S-Herrera; Fire Assays for BLM). We agree that assay results are representative of the deposit and are incorporated into our sampling data.

B. Verification of Drilling Results

Phelps Dodge core produced during the 1970-1974 drilling program was obtained from Bill Silberman and selected portions thereof analyzed by BLM. The assay results are shown in **Appendix 11B.** These samples were all of quartz veins or of volcanic rock containing quartz veinlets. Gold values which we obtained from our assays performed on sample splits of selected intervals of these cores ranged from 0.08 to 25.0 oz/ton. These results were similar to those reported on the Phelps Dodge logs as recorded in Herrera's thesis (1988). The range in assay values is representative of the high-grade quartz vein mineralization in the Bodie mining district. It further confirms the stockworks epithermal vein model for this deposit (**Appendix 9**).

C. Verification of the Ore Deposit Model

Our sampling program verified the stockworks ore body model for mineral deposits of the Bodie mining district. We observed quartz vein mineralization throughout the areas with wall-rock alteration that had grades of 0.1 to 25.0 ounces per ton. Our 5 to 15-foot long chip-channel samples in the altered zones typically gave results of .02 to .04 ounces gold per ton. This pattern of mineralization was also observed in the Phelps Dodge cores we examined from Bodie Bluff.

We did not observe any visible gold in any of the samples we collected or examined. Bill Silberman, who had studied the geology and ore mineralogy at Bodie from 1960 to present, said that one afternoon his daughter found a vein specimen containing a speck of gold on the dump at the Rose Clip quarry. To his knowledge, that is the only report of visible gold in Bodie ores since the 1930's (verbal communication, 1995).

D. Verification of Ore Reserves

The different ore reserve estimations that have been made at Bodie, based on similar data sets, are due to differences in assumptions about the continuity of mineralization between data points, the most appropriate recovery method (milling vs. heap leaching), and about the possibility of an operator being able to get all the permits required for mine development within the Bodie Bowl (risk factors).

1. General Observations

Our surface and underground sampling revealed the presence of anomalous (>0.020 oz/ton) gold values in both low-grade stockworks deposits (>0.025 oz/ton), as well as high-grade veins (>0.1 oz/ton). Illustrations of this distribution of assay results is found on **Maps 15a and 15b** . Analysis of drill core and of sample splits from the U.S.G.S. specimen collection indicated that both types of mineralization exist 500 feet below the present ground surface.

2. Maximum Extent of Minable Mineralization from Company Records (Geologic Reserves)

The Homestake-Galactic cross sections and horizontal sections of Bodie Bluff and Standard Hill were analyzed in order to determine what claims would be excavated under a full-development scenario at Bodie. Based on the proposed pit plans for the ore blocks denoted in these sections, a map showing the maximum extent of mining of the stockworks ore deposits was made by Gregg Wilkerson in April, 1997. This map was verified by Larry Vredenburgh using drilling data provided by Amax corporation to construct a geologic model of the Bodie Bluff-Standard Hill ore body **(Map 16)**. This map defines the limit of economic mineralization in the ore deposit model as represented in Galactic's maps and cross sections. In our Techbase model for this geologic reserve, we used a cut-off grade of 0.018 oz gold per ton **(Appendix 23)**

a. Acres

The unpatented claims that lie within the maximum extent of minable mineralization as dervied from company records, is depicted in **Map 16** is summarized in **Table 7**.

Table 7 Acres of Mineralization on mining claims in the Bodie Bowl according to Galactic Records (Geologic Reserves)	
CLAIM	ACRES
Arthur	4.6
Belvedere	7.6
Bluepoint	18.8
Central Pacific	1.0
Georgia	8.8
Texas	8.4
Union Pacific	7.3
Vindicator	17.1
Zeus 85A	11.3
Zeus 197	16.3
TOTAL	101.2

Of these, only the Texas, Vindicator and Belvedere claims are 100% within the open pit planned by Galactic. Several of these claims are over claim fractions, with most of the claim over private land. The acres in Table 8 reflect the claim fractions based on seniority of claim location or date of patenting. The mining area identified on **Map 16** covers 161.42 acres. Of these, claim ownership is as follows:

J.S. Cain	113.21 acres (70.1%)
Galactic (Bodie Consolidated)	17.84 acres (11.1%)
Lost Carcass and Buzzard	30.37 acres (18.8%)

b. Tons

Using proprietary cross sections and plan maps of ore bodies supplied by Galactic and Amax, a generalized, manually produced final pit plan was developed by BLM mineral examiner Gregg Wilkerson using the following assumptions:

1. The pit walls have a slope of 1:1.
2. The lowest elevation of mineralization at Bodie Bluff is 8,500 feet above mean sea level.

3. The lowest elevation of mineralization at Standard hill is 8,000 feet above mean sea level.

The pit design was overlaid on the 1 inch = 200 foot topographic contour map supplied by Lost Carcass and Buzzard Mining Company. The contour interval on this map is 10 feet. By comparing elevations on these maps, an isopac map was constructed of the thickness of material that would be removed from the zone of mineralization (**Map 16**).

This isopac map was overlain with a claim map at the same scale. A planimeter was used to determine the area and depth of mining that would occur on each claim block used to calculate volume and tonnage.

The following estimates were calculated:

- ▸Total amount of material (ore and waste) in pit that would be mined: 214,576,000 tons
- ▸Tons of ore: 40,000,000 (based on company estimates)
- ▸Tons of waste: 174,000,000 (calculated by Gregg Wilkerson, based on a hand-drafted version of **Map 16**)
- ▸Stripping Ratio: 4.3:1
- ▸Material on private and BLM claims held by the **J.S. Cain** : 162,592,000 tons (75.8%)
- ▸Material on private lands held by **Lost Carcass**: 34,048,000 tons (15.9%)
- ▸Material on BLM claims held by **Bodie Consolidated**: 6,727,000 tons (3.1%)
- ▸Amount of material on private lands: 177,822,000 tons (82.9%)
- ▸Amount of material on BLM land: 36,753,000 tons (17.1%)

The calculations used by Gregg Wilkerson to arrive at these estimates are provided in **Appendix 25.**

3. Techbase Computer Modeling

a. Introduction

Computerized ore body modeling was performed by Amax (1992, using the Meds System) and Nerco (1990). All data used by Amax in their ore reserve calculations was converted from their ore body modeling program to Techbase format and provided to BLM. Our analysis of this data, which is a compilation of drilling, surface and underground sampling, generally agree with the findings of Amax and Nerco when similar assumptions are applied to the analysis.

The companies that have explored at Bodie since 1970 concluded that more drilling would be necessary before they could state with confidence that there was a mineable ore body. They would prefer to have a 50-foot drill spacing throughout the deposits before committing to the development of a mining property. The present amount of drilling, while substantial, provides only a 100-foot to 200-foot spacing for much of the areas indicated as having a reasonable expectation for development .

Galactic concluded that the uneven distribution of gold through the ore deposit was so severe a limitation to computerized ore body modeling, they utilized hand computed ore blocks to develop an ore reserve model. The computerized results were generally lower than those calculated by hand (**Appendix 24**).

However, other companies, Amax and Nerco as mentioned above, were satisfied with results they obtained. We used Techbase, a computerized ore body / mine modeling program, as a tool to evaluate the validity of the mining claims and to verify the company-supplied data. Our computer modeling determined mineable reserves of **33,942,707** tons of gold ore with an average grade of **0.035** oz Au/ton. BLM geologist Larry Vredenburgh conducted this estimation. In order to competently use this program, he attended several weeks of training at the Techbase facilities in Lakewood, Colorado. Mike Norred, president of Techbase examined Mr. Vredenburgh's work, to determine that he was properly applying the program to the Bodie drilling data.

b. Process

The process of computer modeling of the Bodie drilling assay data involved five principal steps: developing a block model, compositing drill assays into uniform intervals, creation of variograms, kriging the block model and a floating cone mine model analysis. The results are further described in **Appendix 23**.

The block model which was developed extends 3,700 feet north - south, 2,400 east - west and 1,000 feet vertically. It encompasses the western edge of Bodie Bluff and Standard Hill east to the Standard fault. The model is skewed 30 degrees east from north to parallel the strike of the principal veins (**Map 7**). The size of the blocks utilized is 25 feet by 25 feet by 25 feet high.

Nearly all drill intervals in the data set were 5 feet in length. Therefore the data was composited into 5 foot intervals. Using these 5 foot composites of the assay data, five grade intervals were developed. The mean for each grade interval was determined and weighted by length of the drill composite.

A variogram was developed for each of the five grade intervals. The variogram is a mathematical model of the assay data which provides information concerning the zone of influence around a sample, and the continuity of the variable through space it is used . An omnidirectional variogram was used (0,0,90; **Appendix 24**). Variograms were calculated from all drill data. High grade assays were not eliminated. A total of 17, 677 composites were used in the calculations.

c. Kriging Methodology

Kriging determines the block protion for each grade interval. By multiplying the average grade by the portion of the block containing that grade gold the weighted average for the total block was determined. A 0.018 oz. gold per ton cut off was used, therefore the lowest grade interval was not used. This cut-off grade was based on an economical analysis of the cut-off grade (see Discounted Cash Flow Analysis, page 69 of this report). The data was kriged using the variogram for each grade interval. Search directions were 300 feet north - south (along strike), 150 feet east - west (across strike) and 30 feet vertically. For this project a maximum of 25 samples and a minimum of 3 samples were used to estimate each value. A rock density of 13 cubic feet per ton;

or 154 lbs per cubic foot was also used. This value was obtained from a confidential report by Nerco.

d. Final Pit Design

Using our ore body model, which determined measured reserves, a final pit design was produced **(Map 16)**. This map represents the maximum extent of minable mineralization or measured reserves as indicated by drilling, underground and surface sampling as of October 31, 1994. It represents the economic limit of mine development which a prudent person would pursue based on all geologic and mineralogic information available on that date. Additional reserves in the Bodie Bowl may be identified in the future by additional exploration drilling

Mineral deposit limits are related to structure, vein and veinlet width and density, and to gold content of the veins. Almost no gold is present in rocks without quartz veins. There is no geologic continuity between ore bodies. They are found along structural trend between ore bodies and many are associated with the tracyandisite flow/sill identified by Gumble (1991). Our analysis of company-supplied economic data is summarized in **Tables 8, 9 and 10.**

Table 8
Geologic and Mine Models (Map 16)

Economic Parameter	Measured Reserves (Techbase)	Inferred Resources Techbase (LV) Hand methods (GW)
tons of ore	33,942,707	88,151,164[a] 120,000,000
ounces of gold	1,187,990	2,027,476[a] 2,500,000
tons of waste	44,548,290	120,142,100[a] 240,000,000
"waste"to ore ratio	1 : 1.31	1 : 1.36 1 : 2
average grade of ore blocks (oz/ton gold)	0.035	.023 .04

[a]Tons of ore, ounces of gold and tons of waste in the Measured Reserves column are included within the figures in the Techbase Inferred Resources column.

MINING COST

In the data we obtained from Galactic, Amax and Lost Carcass and Buzzard Mining Company, there were many estimates of ore grade and ore reserves. There was not very much

information, by comparison, for mining costs. The available cost information, supplied by Galactic and Amax are presented in **Table 10**. We examined these costs in comparison with other operations, and found that company cost estimations at Bodie are within the range of those reported from other recently-operating open-pit gold mining operations in California and Nevada (**Table 11**).

Table 9
Bodie Ore Reserve Estimates
(Geologic Reserves)
(Confidential Information)

Date	Author	Company	Tons of Ore x (1,000,000)	Average Gold Grade (oz/ton)	Stripping Ratio
1946	McClusky	Treadwell-Yukon	76	.038	
1986	Chesterman et al.	C.D.M.G.	25	.053	
1986	Staff	Homestake	24.5	.069	
1987	Jennings	ASARCO	30.7	.057 Au 0.36 Ag	
1987	Jennings	ASARCO	13	.086 Au 0.46 Ag	
Jan. ,1988	Staff	Homestake	24.568	.069 Au 0.42 Ag	
Jan. , 1988	Staff	Homestake	9.361	.067 Au 0.27 Ag	
Jan., 1988	Staff	Homestake	15.207	.070 Au 0.51 Ag	
April, 1988	Enders	Galactic (Wyman)	12.9	.059	
May, 1988	Enders	Galactic	46	.038	
May, 1988	Hollister	Galactic	40	.04	
May, 1988	Coulson	Galactic (Wyman)	70 12.5	.036 "break even"	
Sept., 1988	Williams and Enders	Galactic (Mattson)	25 75	.069 .036	
March, 1989	G.S.I.	Galactic	34	.038	
May, 1989	Enders et al.	Galactic	34.145	.038	
June, 1989	Wells	Galactic (Coulson)	24.2	.036	1: 2.7
June, 1989	Barker	Galactic	22	.037	

Table 9
Bodie Ore Reserve Estimates
(Geologic Reserves)
(Confidential Information)

Date	**Author**	**Company**	**Tons of Ore x (1,000,000)**	**Average Gold Grade (oz/ton)**	**Stripping Ratio**
July, 1989	Haddon	Amax	36.1	.036 $1.3x10^6$ oz Au	
July, 1989	Hollister	Galactic	34	.048	
Oct., 1989	Wolverson and Laskoski	Amax	5	.036	
Nov., 1989	Hollister	Galactic	34	.048	1: 2
1990	Staff	Amax	22 19.5 34 46 21.1	.0385 .031 .047 .036 .031	
Jan, 1990	Blair	Amax	heap leach 40 mill ore 10	.02 .07	
June, 1990	Harlan	Amax	10.611	.031	
June, 1990	Heiner	Nerco (Albanese and Gaard)	8 31	.028 .04	
Aug., 1990	Whitehead	Galactic	25	.04	1:1 to 1:3
May, 1992	Sweeney	U.S. Bureau of Mines	heap leach 37.14 mill ore 27.85	.043 .045	
1993	Sweeney	U.S. Bureau of Mines	24.4	not stated	
Dec., 1993	Davy International	Galactic (Trustee)	27.873 35.1 45.1	.0388 .09 .061	1: 1.6
1995	Hollister and Silberman	U.S. Geological Survey	23.810 75	.042 .037 Au; .08 Ag	

Table 10
Capital and Operating Cost Estimates in the Bodie Bowl from Previous Feasibility Studies (Confidential Information)

Date	Author	Company	Capital Costs (x 1,000,000)	Operating Costs ($/ton)	Permitting (x 1,000,000)
1946	McClusky	Treadwell-Yukon	0.4	1.87	
8/20/88	Hollister	Galactic	71.2	10.00	
5/11/88	Coulson	Galactic (Wyman)	49.9 to 92.6 71.2	9.80	
Sept., 1988	Williams and Enders	Galactic (Mattson)	71.0		
June, 1989	Wells	Galactic (Coulson)		4.25	
6/15/89	Coulson	Galactic	51.2	9.16	
July, 1989	Haddon	Amax	55	$225/oz	10
1989	Pashall	Galactic	7.1-55.0		
5/23/90	Staff	Galactic	100-141.7		
3/13/90 4/15/90 6/10/90 7/10/90 7/10/90	Staff	Amax	29 38 30 30.1 34.1	36.22 25.40 17.75 16.01 16.01	
5/8/90	Hyyppa	Amax	29.4	3.28	
6/32/90	Harlan	Amax	29.4	3.28	
9/14/90	Parks	Galactic	62.47	NA	
9/24/91	Currie	Galactic	95.2	3.25	
Dec., 1993	Davy International	Galactic (Trustee)	32	7.23	2.0

Table 11 **Comparative Capital and Operating Costs outside the Bodie Bowl** **(Confidential Information)**				
Company	Mine	Capital Costs (x 1,000,000)	Operating Cost ($ Per Ton)	Permitting (x 100,000)
Sunshine	Snow Caps	.5	10.50	50,000
Sonora	Jamestown	51	12.83	800,000
Electra	Aurora	4	20.00	200,000
Nevada Goldfields	Aurora	10	39.80	100,000
Mining Cost Service	General, U.S.	32 to 76	5.06	NA

DISCOUNTED CASH FLOW ANALYSIS

We used a discounted cash flow (DCF. **Appendix 17**) analysis to help quantify our determination of mining claim validity. The purpose of this exercise is not to appraise the properties involved in the Bodie project. It is a tool for applying the "Prudent Man" and "Marketability" tests required by case law and regulation. After considering all the economic criteria, the DCF is used to establish a minimum mine grade that would support a development project at Bodie which would yield a zero net present value at an appropriate discount rate. In other words, after considering all geologic and mineralogic information available, by this method, a positive cash flow in the DCF analysis is considered by us to indicate validity of discovery under the General Mining Law of 1872.

An economic analysis of the Bodie Project was made using the parameters summarized in **Table 12** and **Appendix 17**.

We constructed our DCF model using the Ortiz mine model described in Mining Cost Service (MCS, 1997). Our model modifies the Ortiz model to account for a lower stripping ratio (1:1.3 *vs* 1:2), a larger scale of operation (35 million *vs* 7 million tons), a higher production rate (6,000 *vs* 4,000 tons per day) and longer mine life (20 *vs* 7 years) for the Bodie Project. All costs were indexed to 1994, which is when the Ortiz mine shut down.

The lower stripping ratio allowed us to estimate lower operating costs for waste removal. Higher production rates and larger resource base allowed us to use lower operating costs due to efficiencies of scale. The Bodie project is **4.86** times the size of Ortiz. Our capital costs are proportionally increased to reflect this change in scale. The main re-capitalizations in the 9th and 16th years are related to replacements of piping systems related to the heap leaching processes. Heavy equipment costs are not re-capitalized or included in original capital costs because they are included in the operating costs as contracted expenses.

Justification for these assumptions listed in **Table 12** and used in our DCF are given below:

A. Tons

This analysis is based on reasonable geologic inference of the existence of gold based on surface, subsurface sampling and drilling (see discussion in Part V of this report). For purpose of mine feasibility studies of stockworks gold deposits, data point spacings of 50 feet or less are generally required. The 79,000 feet of drilling on Bodie Bluff and Standard Hill provided this spacing for some of the Bodie deposit, but not all of it. Specifically, additional drilling planned for 1991-1992 on the Georgia and Blue Point unpatented mining claims on the northeast flank of the Standard Hill "Bonanza Gold Zone" (Herrera, 1983) was not conducted.

A mining company conducting a feasibility study of a property for a potential mine must identify proven reserves to satisfy the Securities and Exchange Commission requirements for freely traded company. However, for the purpose of validity determinations, mineral examiners are only required to verify the presence of a physical discovery on each claim that would engender a reasonable belief that minable mineral deposits exist on the claims (U.S. v. Feezor; 75 IBLA 56 (1983)). This broader definition would include what some of the company reports called "Indicated Reserves". In some geologic reports about Bodie available to us, a distinction was made between "Proven" and "Inferred Reserves". The estimates catalogued in **Table 9** are of ore reserves indicated by computer or manual ore body modeling of geologic reserves. They are not mine models. Our independent sampling program and evaluation of company data identified a mine model with reserves illustrated in **Table 8**. We assume that this volume of rock, as represented by the Techbase-generated ore body model, indicates the amount of excavation that would be needed to extract all the minable gold (ounces) which we could identify in the Bodie Bluff and Standard Hill deposits. We estimate that this volume or rock contains **33,942,707** tons of ore with an average grade of **0.035** oz gold per ton. This would result in an ore-to-waste ratio of 1 : 1.31. Operating and capital costs reflect this ratio (**Appendix 17**).

Table 12. Parameters for DCF analysis for Mine Model.	
Tons of minable ore	33,942,707
Dilution	10%
Gold Price	$396 for 1994, $466 average for project
Recovery (Leach cycle)	90%
Capital Cost	$25,996,016 (contract mining) with $3,653,802 in 9th and 16th year.
Operating Cost	$10.04
Project Life	21 years
Working days per year (mill)	240
Mining Rate	1,600,000 tons per year
Permitting Cost	$50,000 ($3,000,000 already sunk into project for this purpose)
Discount Rate	5.65%
Risk Factor	0% not considered in this analysis
Net Present Value	$0.00 set to zero to identify minimum average mine grade
Gold Price Escalation Factor	2% per year
Labor Cost Escalation Factor	1.2% per year
Taxes	43%
Cut-Off Grade	0.0177 oz Au/ton
Average Ore Grade of Mineral Deposit at zero NPV	0.030 oz Au/ton
Mine Grade (developed from Techbase mine modeling program)	0.035 oz Au/ton

B. Dilution

Our analysis assumes a **10%** dilution. Bulk mining techniques are generally able to perform selective mining of high-grade areas. But the stockworks nature of the Bodie deposits is

such that some waste will inevitably be mined and processed along with ore. Most large-scale gold operations in the Western U.S. are able to achieve dilutions of 10% or less. Since dilution is included in the Techbase ore body modeling, it is entered as zero in **Appendix 17**.

C. Average Grade and Cut-Off Grade

1. Gold Grade

The stockworks at Bodie have very high and very low grade zones. The distribution of assay results from drilling data for gold in the samples we analyzed are shown in **Table 13.**

Of these samples, 84.7% are below the minimum cut-off grade of most large gold mines in the Western U.S. (0.020 oz/ton). It is important to note the difference between **average** mine grade and **cut-off** grade. The difference between these grades is illustrated as follows:

The mine **cut-off** describes those blocks of ore, as determined by blast hole assay, which can be selectively mined. Some of the excavated material will go to processing and the rest to waste. For a dump leach, all mining and trucking costs being equal, the cut-off is determined solely on processing costs. For example, if processing costs are $2.00 per ton , at $400 per ounce gold value, then the cut-off to obtain a profit will be 0.005 oz/ton. Anything above this would be profitable. Anything below would be waste.

Table 13
Gold Distribution in the Bodie Bowl

Assay value (oz/ton)	Number of Samples	Percent of Samples
0-.005	8,116	51.7
0.005-0.01	3,006	19.2
0.01-0.02	2,167	13.8
0.02-0.03	827	5.3
0.03-0.04	417	2.6
0.04-0.05	252	1.6
0.05-0.06	175	1.1
0.06-0.07	110	0.7
0.07-0.08	102	0.65
0.08-0.1	105	0.64
0.1-4.0	409	2.6

In contrast, the **average** or **minimum deposit** grade is a commodity concentration (in this case, gold) needed to support a profitable mine. It considers all the material that is excavated, moved and processed or re-located to mine dumps. This grade is determined by leveraging the DCF model so as to achieve a Net Present Value of zero. At a reasonable discount rate, the rate of return would be acceptable to a prudent person and allow for a profit greater than zero. Examples at currently active mining operations in California are given in **Table 14.**

We calculate the cut-off grade for the Bodie project as follows:

Haulage out of Bodie Bowl	\$1.98 per ton ore
Cost of processing ore on heaps	\$5.01 per ton ore
Total	\$6.99 per ton ore
Cut-off grade (\$7.23/\$400)=	.0177 oz Au per ton

This cut-off grade is the difference in cost between processing ore and processing waste for this project. Any material above this grade can go to the heap pads for economic recovery. However, the **average** grade must be higher to support the cost of construction and mining to get the ore and waste to the plant (e.g. 0.035 oz/ton Au).

The distribution of gold in the Bodie Bowl is such that most of the gold occurs in the high-grade blocks (**see Table 13 and Appendix 23**).

Table 14
Average Mine Grade vs Cut-off Grade

MINE	PROCESS	AVERAGE MINE OR MINIMUM DEPOSIT GRADE (oz Au/ton)	CUT-OFF GRADE (oz Au/ton)
Mesquite	Dump Leach	0.022	0.006
Imperial	Dump Leach	0.018	0.005
Viceroy	Mill Crushed Heap Leach	0.033	0.010
Bodie	Heap Leach	0.035	0.018

2. Silver Grade

The samples we analyzed contained, on the average, 15 times more silver than gold. Nerco (1990) determined that the gold/silver ratio for surface samples was 1:6 and that it decreased downward to 1:20 at a depth of about 500 feet. Galactic assumed a gold/silver ratio of 1:12. Assuming n statistical mean gold grade of 0.04 oz/ton leads to a calculated average silver grade of

0.48 oz/ton. With a silver value of $5.00 per ton, this would add a value of **$2.40** per ton to the ore. Our selected gold price for this analysis (see below) reflects this added value.

D. Gold Price

Gold prices in 1992 varied from $345 to $404 per ounce (Bureau of Mines, Mineral Commodity Summaries, p. 72). On the date of withdrawal of the Bodie Bowl from the general mining laws, the price of gold was $365 (Engineering and Mining Journal). Given the historic swings in gold value over the past 10 years, and looking at a future project of 16 year duration, we apply a gold value that is representative of the market and reasonable expectations of future gold price on October 21, 1994.. This procedure follows the precedents set forth in *Pacific Coast Moly* (IBLA 81-1027, 1983). Our analysis applies a historic price escalation of 2% per year for operation years 2 through 11. In our DCF analysis we use a gold price of **$396** in 1994 and an average gold value of **$466** for the project. These values include a $2.40 per ounce silver credit.

E. Recovery Factor

In order to evaluate recovery factors identified by Galactic, Homestake and Amax, and the most appropriate recovery process for heap leaching operations, we performed a metallurgical study on the best exposed section of the stockworks gold mineralization we could observe, which was at the Roseklip Pit on Standard Hill.

We assume that the mineralization exposed in this Pit is representative of the material that would be mined on Bodie Bluff and Standard Hill. We conducted this sampling program to evaluate average ore grades and recovery factors for heap leaching, gravity separation and floatation technology for these ores. It was also performed to catagorize the style of gold mineralization and most effective recovery method.

The testing was made on a composite set of chip-channel samples (#1 through #17, Appendix 11B) which totaled 350-foot in length from the Roseklip Pit, part of the "Bonanza Ore Zone" of Herrera (1988). The samples were collected by BLM and BOM staff, and transported to McCleland Laboratories of Reno, Nevada for analysis. We selected this laboratory because of their reputation and previous satisfactory work from previous BLM projects. McCleland Laboratories performed gravity recovery, floatation and column cyanide leach tests on this composite sample. Flotation gave an 85% gold recovery and cyanide yielded 90% recovery for samples crushed to size of 10 mesh. This indicates that much of the gold in the Bodie deposits (on Standard Hill-Bodie Bluff) exists either as free gold or gold bound in sulfide minerals. Galactic, Nerco and Amax used recovery factors ranging from 70 to 85%. Finer grinding of the ores would increase recovery to over 90% (**Figure 6**).

At Bodie, while most samples collected and analyzed over the past 30 years have low (e.g. >.02 oz Au/ton) gold values, the relatively few high-grade samples (409 samples with over 0.1 oz

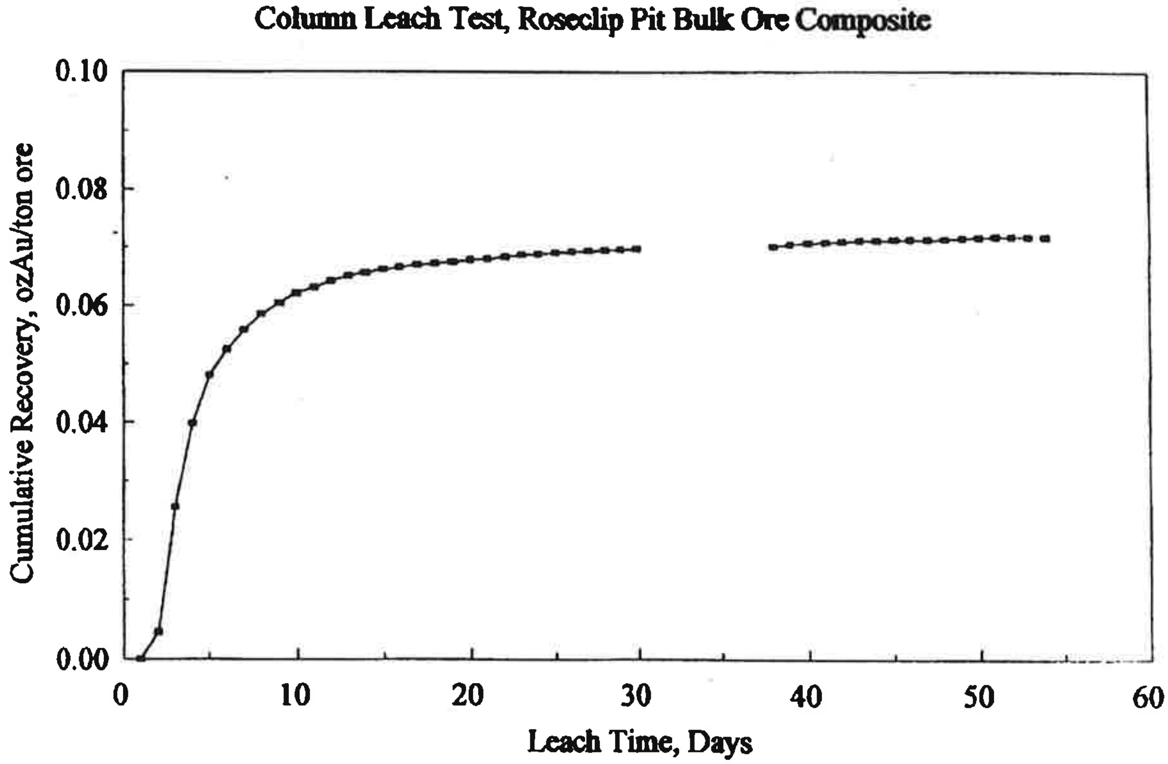


Figure 6. Column cyanide leach test recovery factor for composite sample from the Roseklip Pit with a head gold concentration of .072 oz Au/ton. Recovery is 90% (.065 oz Au/ton over a 40 day leach cycle. Rest cycle on days 30 to 37 indicates that there were no residual accumulations of gold in the leach column.

Au/ton) yielded results which indicate an average grade for the deposit of **0.035** oz/ton. High-grade values are associated with vein structures. The vein density we observed on surface outcrops at the Roseklip pit are representative, we believe, of those on Bodie Bluff and Standard Hill. Our metallurgical testing of **350** foot-long chip-channel samples of this area indicated an average gold content of 0.065 oz Au per ton, well above our cut-off grade of 0.018 oz Au/ton. This long channel sample included several feet of nearly barren material. This observation gives us confidence in applying an average grade of 0.035 oz Au/ton to our mine model.

Based on our testing, we believe, for the purpose of evaluating discovery, that a 90% recovery factor is reasonable for the Bodie deposits.

F. Capital Costs

Estimates for capital costs for the Bodie project range from $7 to $141 million (**Table 10**). It is unlikely that mineral beneficiation facilities would be able to be located within the Bodie Bowl because of its special land status and associated environmental restrictions. Special cost considerations associated with these environmental needs are discussed below (**see Table 14**). We used the Oritiz mine model described in Western Mine Engineering (1997, page CM-D1 to D6) to estimate capital and mine costs for this project. We adjusted the parameters in that model to reflect the conditions in the Bodie Bowl in 1994 and for the increased life of the project which was reflected in the size of heap leach pads. (**Appendix 17**).

1. Mining Plan

While open-pit mining is the most cost-effective means of developing the mineral deposits at Bodie, a special mining method would need to be engineered to reduce impacts to archaeological and cultural resources. Our mine plan excavates the Bodie ore bodies using conventional drilling, blasting and mucking technologies. The mining would be done with electric shovels or front-end loaders. Following blasting and excavation, waste is conveyed by truck to waste dumps on private lands at Bodie Bluff-Standard Hill or on the Parker-Whitney Mill Site. Ore-grade material would be transported by mine truck to an off-site production facilities on unappropriated BLM lands in the south-flowing tributary to Bodie Creek immediately east of the Bodie Bowl in Sections 11 and 14 of T. 4N. R. 27E (**Map 6**). Heap leach cyanide recovery would be used to remove gold from the ore. Our mine model assumes that all of the material excavated from the Bodie Bluff and Standard Hill deposits would be oxidized and susceptible to standard heap leach/agglomeration processing. Our model assumes that the deposit could be mined through contract. Costs reflect this scenario.

2. Ore Processing Facilities outside the Bodie Bowl

In 1990, most of the Bodie Bowl was covered with mill site mining claims. There also was a line of mill site claims between Bodie and a site south of Aurora in Nevada. These claims were for an envisioned conveyor system which was being considered by Galactic in 1990 (personal communication, Mark Whitehead, 1991). With the introduction of the $100 holding fee in 1990, Galactic Resources elected not to keep its mill site claims. As of date of our examinations, there are only 2 unpatented mill site claims in the Bodie Bowl and one patented mill site outside the proposed open pit which comprise only 10 acres. A mining operation would require an estimated 1,200 to 2,000 acres for heap pads and waste dumps. This condition requires that processing facilities be constructed outside of the Bodie Bowl, because no new mill sites could be located the in the area withdrawn from the mining law. That is the assumption we use in developing our mine modeling. Processing outside the Bodie Bowl increases costs above those described by the Oritiz model by **$1.98** per ton of ore.

a. Water Requirements

An estimation of water availability in and around the Bodie Bowl was made (**Appendix 22**, Freeze and Cherry, 1979). Our mine model requires a year-round water availability of 400 gpm (576,000 gpd). By comparison, the Aurora project, adjacent to Bodie, requires 400 to 530 gpm (John Huttsion, May 19, 1997, verbal communication). The six wells (47 to 399 feet deep) in the Bodie Bowl, drilled by Galactic, each produce 8 gpm (total 69,120 gpd; Beak, 1992, p. 5-19, 5-20).

Five wells were developed by BCMC. As a result of drilling these water wells, BCMC concluded that there is a regional aquifer developed within fractured dacite (Beak, 1992, p. 4-41). The water surface ranges between the elevation of 8,124 and 8,130. One well north of the mill tailings produced 150 gpm, another well south of the tailings produced 250 gpm. On Bodie Bluff and Standard Hill, the water table is between 47 and 399 feet below the surface. The wells drilled by BCMC are not currently being used. We estimate total water availability in the Bodie Bowl and surrounding basins to be in excess of 400 gpm. This value will be used in our evaluation of the feasibility to process ores in an area immediately east of the Bodie Bowl. This volume is sufficient to meet proposed mining and milling requirements.

These areas for well target locations are identified as follows:

Murphy Springs Area

T.4N, R.26 E, Sections 13,14,15,22,23,24,25,26,27
T.4N, R.27 E, Sections 19,30,31

Bodie Creek-Northeast Mono Basin Area

T.4N, R.27E, Sections 13,14,15,16,21,22,23,24,25,26,27,28,33,34,35,36

This area is north of a Los Angeles Department of Water and Power water withdrawal. It is south of the proposed area for the heap leach plant and pads in Sections 11 and 12 of T.4N, R.27E.

The combined areas described above cover 28 square miles of which only 4 square miles would need to be developed with wells to supply the water needs of the Bodie mining project (**Appendix 22**).

This analysis recognizes the geologic fact that high rates of water recovery are possible from fault and fracture zones in the Bodie Bowl. Several large open shafts at Bodie are full (to within 30 feet of the surface) of water year-round. Two to ten wells drilled on private lands on the main Bodie fracture system at Silver Hill in addition to what could be produced from existing water-filled shafts would likely produce enough water to meet the 400 gpm need for this project. The hydrologic data in the region support the conclusion that there is a sufficient unappropriated water resource available in the Bodie area to supply the water requirements of the mine model

described in this report. We consider the Oritz mine model (Western Mine Engineering, 1986, p. CM-D1 to D6, indexed to 1994) to reflect costs for water production in the Bodie Bowl.

3. Overall Capital Costs

Our estimation of capital costs is a modification of costs identified by Mining Cost Service (MCS, 1994, p. CM-D5, D6) and U.S. Bureau of Mines cost estimation models (BOM, 1992). Our model is for a surface mine with a **1 : 1.31** waste to ore stripping ratio at **6,667** tons per day **(1,600,000** tons per year). The adjusted capital cost this project, based on the Oritz model, is **$25,996,016** plus **$3,653,802** for recapitalization in the 9th and 16th years of the project (**Appendix** 17).

G. Operating Costs

1. Mining and Heap Leaching

Estimates of operating costs at Bodie range from $4.26 to $36.00 per ton (**Table 10**). These variations are due to differences in analysis between scenarios which envision mining small quantities of high-grade ore (0.06-0.09 oz/ton, up to $36.00/ton) and larger mining scenarios that would produce gold from ores as low as 0.025 oz/ton (as low as $4.25/ton). We used the Oritiz mine model as a basis for cost estimation for this investigtion and adjusted costs as shown in **Appendix 17** to arrive at an over-all operating cost of **$10.04** per ton of ore. Capital and Mining Costs are summarized in **Table 15.**

H. Permitting Costs

Galactic and Homestake have already spent over $3,000,000 in pre-permitting costs for this project, including extensive archaeological, biological, visual impacts and toxic material studies (Beak Consultants, 1992; Hardesty et al., 1991). The Oritiz model uses a cost $683,000 for permitting costs. We estimate that only and additional **$50,000** would have been required in 1994 to bring the Bodie project on line for a moderate-scale contract mining operation. We adjusted the Oritz model accordingly (**Appendix 17**).

Table 15 Capital and Operating Costs 34,000,000 tons of ore at 1:1.31 waste to ore stripping ratio and 6,667 tpd			
Operation	**Capital Cost**	**Operating Cost per ton or ore**	**Reference**
Mining and Heap Leaching	$25,996,016 plus $3,653,882 recapitalization in the 9th and 16th years.	$10.04	MCS (1986, p. CM-D1 to D-6 and **Appendix 17**)
Additional haulage to processing site outside Bodie Bowl	$0.00	$1.98	Bureau of Mines Bull. 9142 (1987, Part 1, page 60)
Permitting	$50,000 ($3,000,000 already spent on project)	$0.00	(**Table 11**, this report)
TOTAL	$30,303,620	$10.04	

1. Environmental Considerations and Mining Costs

Because of it's proximity to Bodie State Park and the area's inclusion in a National Historic Landmark, development scenarios at Bodie were made with a detailed analysis of affects the project would have on the State Park and it's visitors (Beak Consultants, 1992; EDAW, 1991). In particular, pit designs were altered so as to minimize visual impacts to the State Park (**Figures 6 and 7**). It would not be possible to develop a mine at Bodie without some negative impacts to the Park and surrounding areas. Some of the viewshed on Bodie Bluff and Standard Hill would be changed. Impacts would be mitigated by moving proposed pit boundaries eastward from their maximum development outlines (**Maps 16 and 20**) and moving beneficiation facilities to a location outside the Bodie Bowl. The legally placed restrictions to be considered in this investigation are those which might produce undue and unnecessary degradation. In the Bodie bowl, the restrictions which we considered were water quality and air quality. Visual or cultural impacts, no mater how impairing, are not legal constraints on mining or on mining claim validity and were not considered on our economic analysis. **Figures 7 and 8**, below illustrate different development scenarios as envisioned by Galactic Resources in 1991.

a. Water Quality

The Regional Water Quality Control Board that oversees water discharge in the Bodie Area. An environmental report by ENSR (1989) indicated that Bodie waters, even when processed through a cyanide leaching program, would be recycled and cleaned by existing technologies to meet EPA and RWQM requirements. Our experience with other mining projects in the area (e.g. Aurora) which have similar geology and hydrology as the Bodie Bowl leads us to concur with this

conclusion. We assume that there would be no significant increase in mining costs for the Bodie project associated with meeting the undue or unnecessary degradation standards for water quality.

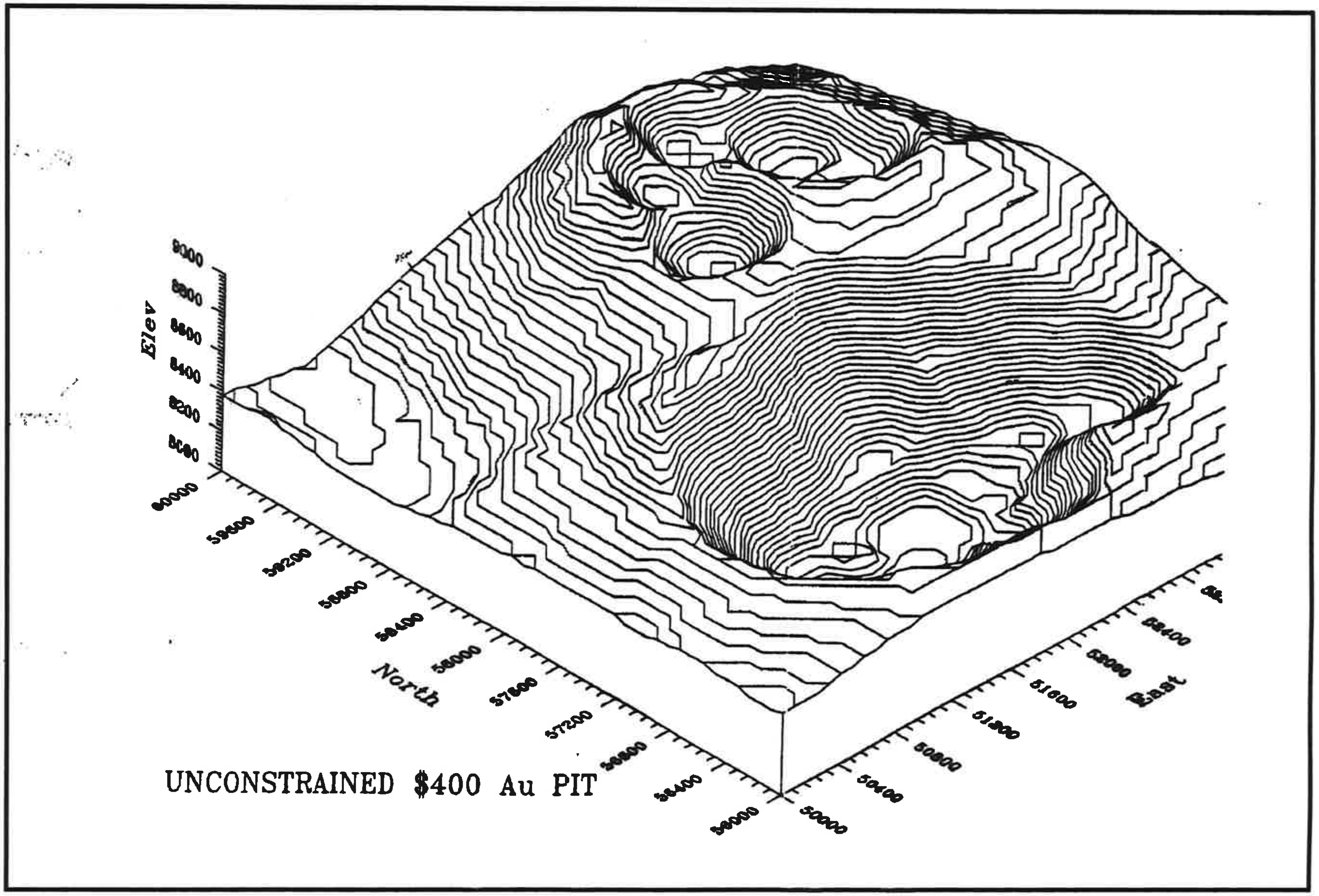


Figure 7. Unconstrained Final Pit Design from Galactic Records.

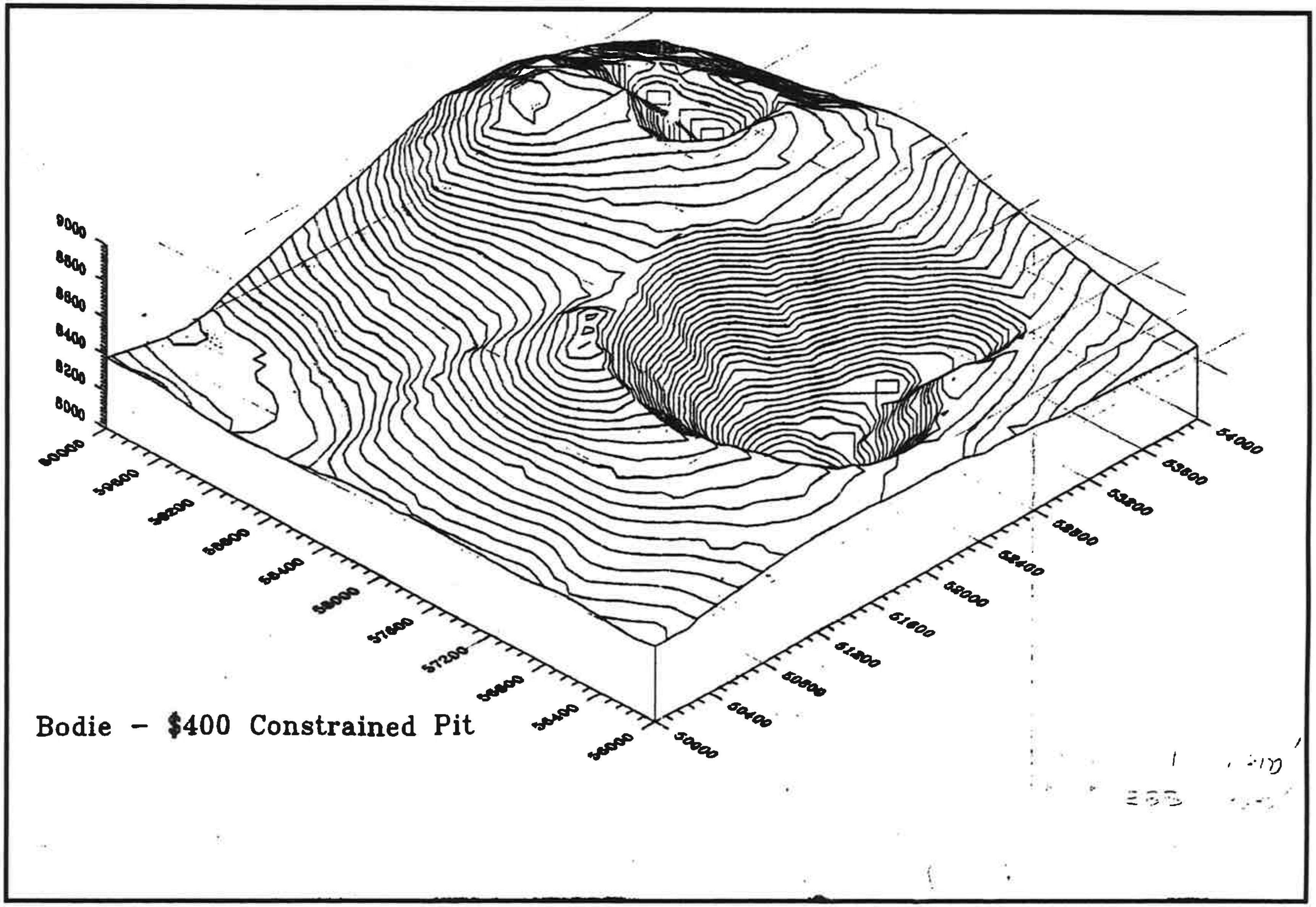


Figure 8. Constrained Final Pit Design from Galactic Records

b. Air Quality

Air quality is regulated in the Bodie area by the Great Basin Air Quality Control District (GBACD). Galactic had conducted a base-line air quality study in preparation of it's Environmental Impact Statement from 1989 to 1992. The main concern of GBACD was PM-10 emissions which have thresholds of 50 micrograms per cubic meter (State, California) and 150 micrograms per cubic meter (Federal, EPA). According to Larry Carmeron of GDACD (personal communication, June 12, 1997), if Galactic had proceeded with it's project, obtained approval from BLM and Mono County and operated as other responsible mining companies have done in Mono County, then they would likely have received an operating permit from GDACD.. Our experience with other mining projects in the area (e.g. Aurora) with similar geology and proposed mining methods leads us to concur with this conclusion. For purposes of this investigation, we assume that there would be no significant increase in mining costs for the Bodie project associated with meeting the undue or unnecessary degradation standards for air quality.

I. Discount Rate and Risk Factor.

Discounted cash flow analysis considers the affects of inflation and risk on the economics of a multi-year capital investment project. Most DCF analyzes of the Bodie Project used discount rates of 12 to 18%. Any capital project should return at least U.S. Treasury bill rates which, in 1994 would have been projected to be in the 4.2 to 6.25% range for the early years of project development. We applied a **5.56%** discount rate based on the low end Treasury bill rate for 13 to 26 week notes for 1994 (**Table 16**).

Table 16
Discount Rates

DATE	PRIME RATE 1	DISCOUNT RATE 2	CERTIFICATE OF DEPOSIT (1-YEAR)	TREASURY BILLS (13 WK AND 26 WK)	TREASURY BONDS (10 YEAR HIGH-LOW) (52 WEEK SPREAD)
07-01-94	7.25	3.25	5.02	4.20-4.60%	5.19-7.27% 6.40-7.96%
12-30-94	8.5	4.75	6.71	5.56-6.24%	4.54-7.78% 6.36-8.36%

J. Escalation Factors

Previous DCF analyzes we studied for the Bodie Project assumed a constant gold value and unchanging operating costs. We consider this to be a critical deficiency in those DCF analysis. While gold values show a great deal of variability, over the past 30 years there is a definite trend. Since 1981, gold prices have escalated at an average rate of 2% per year. Hence we use that value for our projection of future gold values. **Appendix 25** provides documentation of historic gold prices through 1997.

Labor costs are going to increase in the future. We use historic labor rate escalation rates for California between 1991 and 1996 (Bureau of Labor Statistics, 1994). This rate is 1.5% per year That rate is assumed to reflect over-all increases in operating costs for the project. **Appendix 26** provides documentation of historic gold prices through 1997.

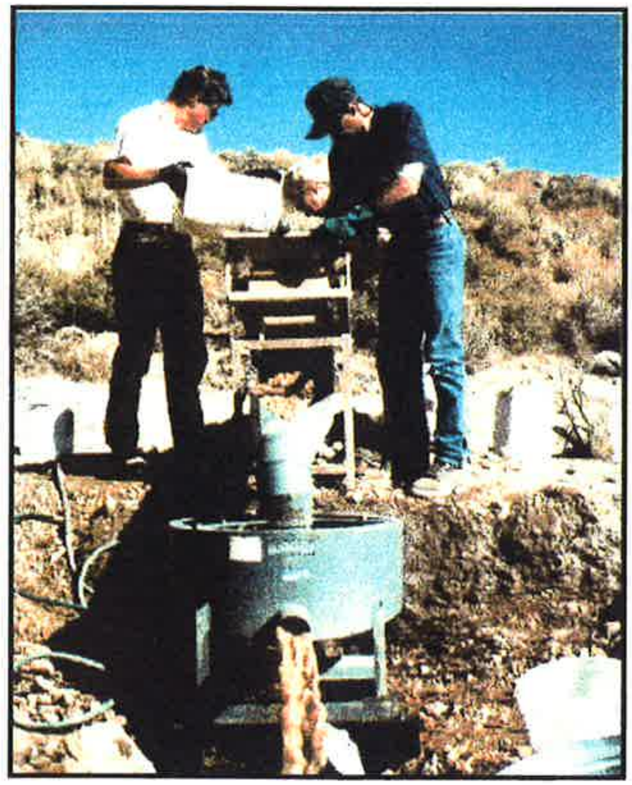
K. Net Present Value and Minimum Mine Grade

Based on the assumptions described above, we leveraged grade to obtain a zero net present value (NPV) for the Bodie Project in it's 21st year. At this zero NPV value, a minimum mine grade of 0.035 oz Au/ton is calculated (**Appendix 17**). This minimum mine grade (calculated from DCF model) is equal to the calculated average grade for the deposit estimated from our Techbase model, **Table 14, Appendix 22**). Hence, we have confidence that all claims which include portions of the development pits identified on **Map 16** contain minable material. These claims meet regulatory requirements for discovery for valuable mineral deposits and are classified by us as valid under the Mining Law of 1872, as amended..

PART III: PLACER CLAIMS

INTRODUCTION

Placer mining in the Bodie district began in 1859 and lead to discovery of the Bodie lode mining district. There are placers on Bodie Creek and on the tributary that drains northward from the eastern flank of Queen Bee Hill and Silver Hill. This tributary stream is named Taylor Gulch. The later deposits were partly buried by ground sluicing debris which came from operations on the eastern flank of Silver Hill and Standard Hill between 1860 and 1930, and mill tailings from the Roseklip cyanide mill in the 1930s. An area of ground sluicing was identified in the vicinity of the Vindicator Claim on the west flank of Bodie Bluff, downhill and west of the saddle between Standard Hill and Bodie Bluff. This area was mapped as "colluvium" by Nerco geologists (**Map 7**).



There are 3 blocks of placer claims in the Bodie Bowl (**Map 1**). The Aurora Association Placer Claim, encompasses 160 acres on the north and northwest flank of Bodie Bluff. The BCP claim block consists of 23 twenty acre placer claims that cover the area of ground sluicing east of Silver Hill, the mill tailings pond and buried placers that lie between the tailings pond and Queen Bee Hill. The Gold's Ghost #1 placer claim is located on a ridge at the extreme northwest edge of the Bodie Bowl withdrawl.

Galactic Resources conducted an exploration trenching program to evaluate placers in 1990. They made 24 trenches on the eastern flank of Silver Hill (**Figure 10**). The trenches formed a semi-circular arc around a small hill between Silver Hill and the Tailings pond which we name Hill 8415. Their evaluation was based on gold fire assays of black sands obtained from the panning of gravels and rock debris. This exploration program identified gold resources which Galactic geologists concluded had upwards of 10,000 ounces of gold in existing placer deposits (**Figure 11**).

We conducted our verification program of placer deposits on October 10-18, 1995 using a back-hoe tractor, Prospector II and Knudson bowl placer evaluation equipment (**see photo this page**).

LANDS INVOLVED

A. Aurora Association Placer

This association placer (CAMC 39101; **Map 1**) contains 160 acres and was located on January 10, 1928 by the J. S. Cain Company. The legal description is the W½NE¼SW¼, SE¼NW¼, NE¼NE¼, NW¼NE¼, W½NE¼NE¼ of Section 9, T. 4 N., R. 27 E., M.D.M.

B. BCP

There are 23 BCP claims (CAMC 238509 through 238531; **Map 1**) totaling 460 acres. They were all located between August 7, 1990 and September 11, 1990 by Bodie Consolidated Mining Company. The legal descriptions of the claim areas are the W½NE¼NW¼, NW¼NW¼, SW¼NW¼, W½SE¼NW¼,W½NE¼SW¼, E½NW¼SW¼ of Section 15, NE¼NE¼, E½NW¼NE¼, S½NE¼, E½SE¼SW¼, N½SE¼, W½SW¼SE¼ of Section 16, NE¼NW¼ of Section 21, T. 4 N., R. 27 E., M.D.M.

C. Washington Gold Mining Company

The Gold Ghost #1 placer mining claim (CAMC 223339, **Map 1**) contains 80 acres. It was located on April 7, 1989 by Sun Desert Mining Company. The legal description is the E½NE¼ of Section 1, T. 4 N., R. 26 E., M.D.M.

GEOLOGIC SETTING

The placer deposits of the Bodie Bowl are the product of erosion of the gold-quartz stockworks exposed in the Bodie Hills. There is also gold in the placers from mining activity that occurred between 1859 and 1933. Effluent from the Standard and Syndicate mills on the northwest flank of the Bodie Hills contributed fine gold to the placers in Bodie Creek. Ground sluicing on the eastern flank of Silver Hill and southeastern flank of Bodie Bluff contributed fine gold and fine gold-bearing pyrite to the mill tailings and recent ground-sluice debris in Taylor Gluch.

SITE GEOLOGY

The placer claims of the Bodie Bowl are of three types:

1) Recent stream placers in Bodie Creek
2) Ground sluicing areas
3) Ancient stream placers

A. Recent Stream Placers

Recent stream placers are depicted on Nerco's geologic map of the Bodie mining district (**Map** 7 this report) and also in the maps by Chesterman et al, 1986. These two maps were used as a basis for this part of our investigation.

Bodie Creek has recent placer deposits which form, in part from erosion of mill tailings and from erosion of gold-bearing quartz veins exposed in the Bodie Hills.

We examined the area of the Gold's Ghost #1 claim in the northwestern corner of the Bodie Bowl, but found it entirely located on a volcanic ridge with no stream or placer material on any part of the claim (**Map 1**).

A sample from Bodie Creek, below the Standard Mill exhibited visual fine gold by panning (Sample #40, located on Aurora Association Placer (**Map 1**) and Zeus 130 lode claim (**Map 13a**).

Stratigraphic levels C and E contain gold-bearing placers. They are separated by a brown clay-sand layer. Isopac maps were made of gravel thicknesses and of the amount of overburden existing atop each of them. An isopac map was also made of tailings thickness. Maps showing the distribution of Gravels C and E and the mill tailings are provided in Maps **17-19**. Volume estimates for the gravels and overburden were made from these isopac maps using a planimeter. The results are found in **Table 17**, below.

B. Ground Sluicing Area

Beginning about 1860 soils were worked by placer methods on the eastern flank of Silver Hill and southeastern flank of Bodie Bluff. These lowered the ground surface up to 10 feet over an area of **65 acres**. In the process of ground sluicing, the placer miners created a concentrated layer of gravel debris which now overlies this ground-sluiced area. The paleo-soils which were washed away also contain fragments of obsidian arrow points and flakes. These flakes were concentrated in the man-made gravels. Placer Sample #41 was collected from ground sluice debris, which did not contain cultural artifacts, within this area.

Another area of ground sluicing exists on the western flank of the Bodie Bowl on the southern part of the Aurora Association Placer Claim in an area mapped as "colluvium" by Nerco geologists (**Map** 7). Sample #37 was collected from this ground-sluiced area.

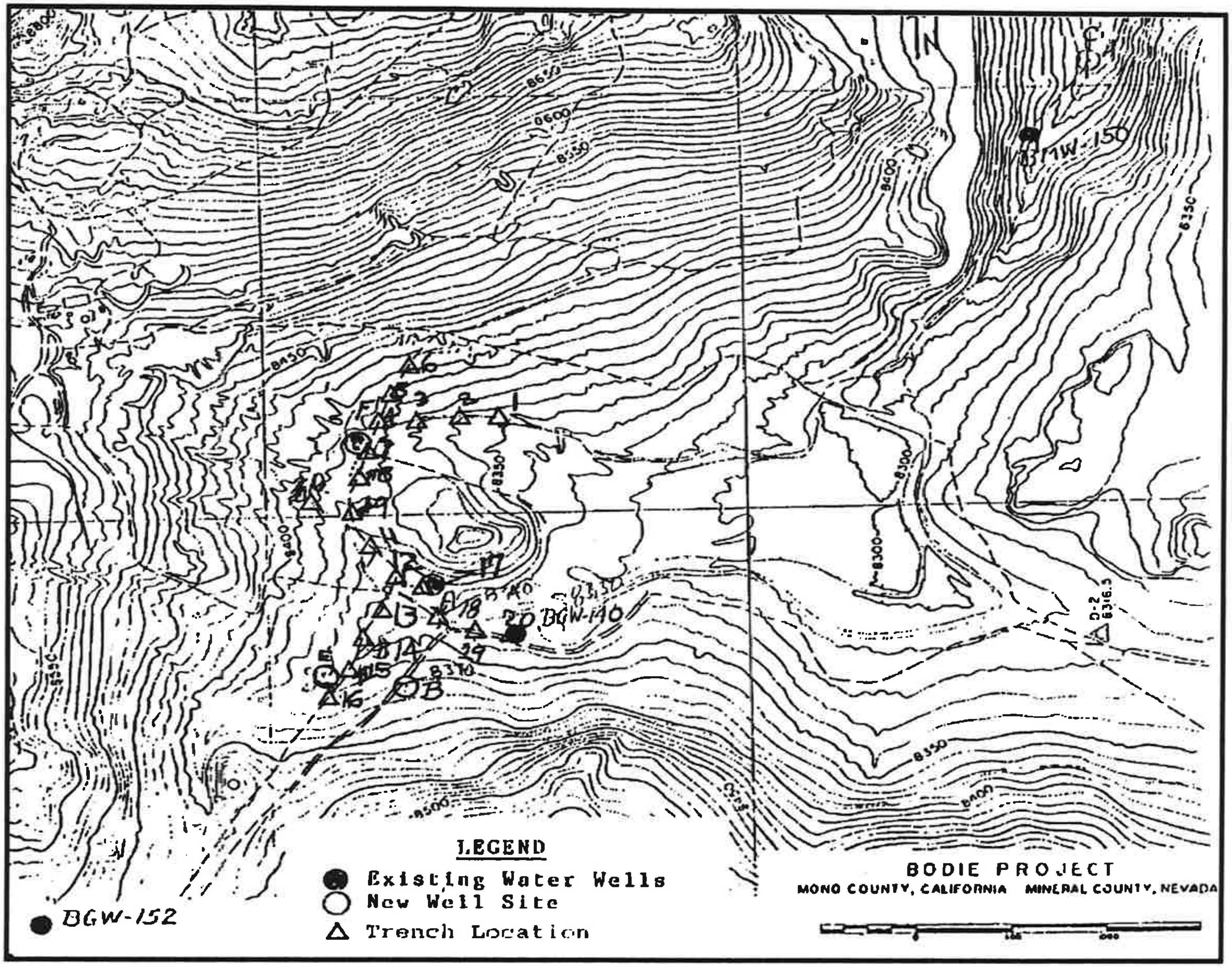


Figure 9. Location map of Galactic's placer exploration trenches.

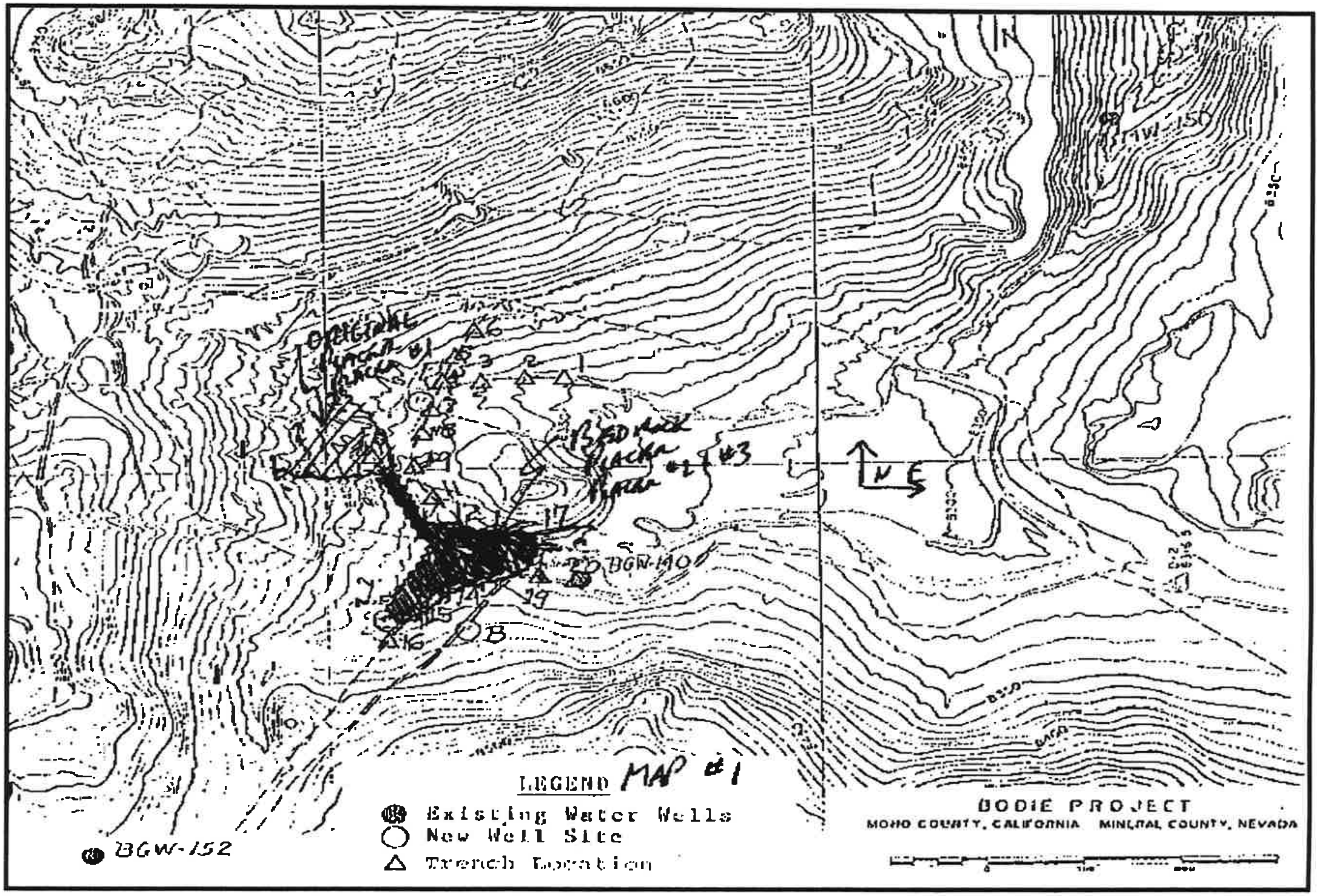


Figure 10. Location map of Galactic's placer gold deposits.

C. Ancient Stream Placers

Our program of 36 test pits on the placer claims identified the following composite stratigraphy (**Figure 11**):

Level A:	Surface soils, generally grey or black. Includes ground sluiced material. One to 6 feet thick.
Level T:	Mill Tailings. Zero to 12 feet thick.
Level B:	Black clay and silt. Two to 11 feet thick.
Level C:	Grey sand, gravel and boulders. Zero to 5 feet thick.
Level D:	Brown clay and sand. Zero to 6 feet thick.
Level E:	Grey or black gravel, sand and boulders. Zero to 7 feet thick.
Level F:	Yellow or white volcanic ash. Zero to 7 feet thick.
Level G:	Decomposed volcanic rocks ("Bedrock")

Table 17
Placer gravel volumes and stripping ratios.

Gravel Layer	Area in acres	Average Thickness (ft)	Average Overburden (ft)	Volume (cu. yds)	Volume of overburden (cu. yds)	Stripping Ratio	Grade Au ($ per yd^3)
"C"	21	1.5	4	50,820	135,520	2.7	0.04 to 3.87
"E"	22	2	10	70,987	354,933	5.0	0.03 to 0.60
Tail-ings	42	5	0	338,800	0	0	0.00 to 0.49

FIELD WORK AND ANALYTICAL TECHNIQUES

A. Sample Collection and Preparation

Samples were located in the field and inspected to insure that trenching would not disturb any culturally significant materials. A back-hoe tractor was used to make trenches up to 14 feet deep and 2 to 4 feet long (at the bottom of the trench). As these trenches were being excavated, their stratigraphy was recorded (**Appendix 19a, Figure 11**). When tailings or gravels were encountered, the back hoe bucket would be used to selectively sample the gravel or tailings layer. This material was dumped in a separate area and nine 5-gallon buckets and collected. Buckets were weighed and excavated density calculated (**Appendix 19b**) The material was then transported to a processing facility we set up in the field. This processing facility consisted of a Prospector II gold separation machine which discharged into a Knudson bowl (**see photo previous page**).

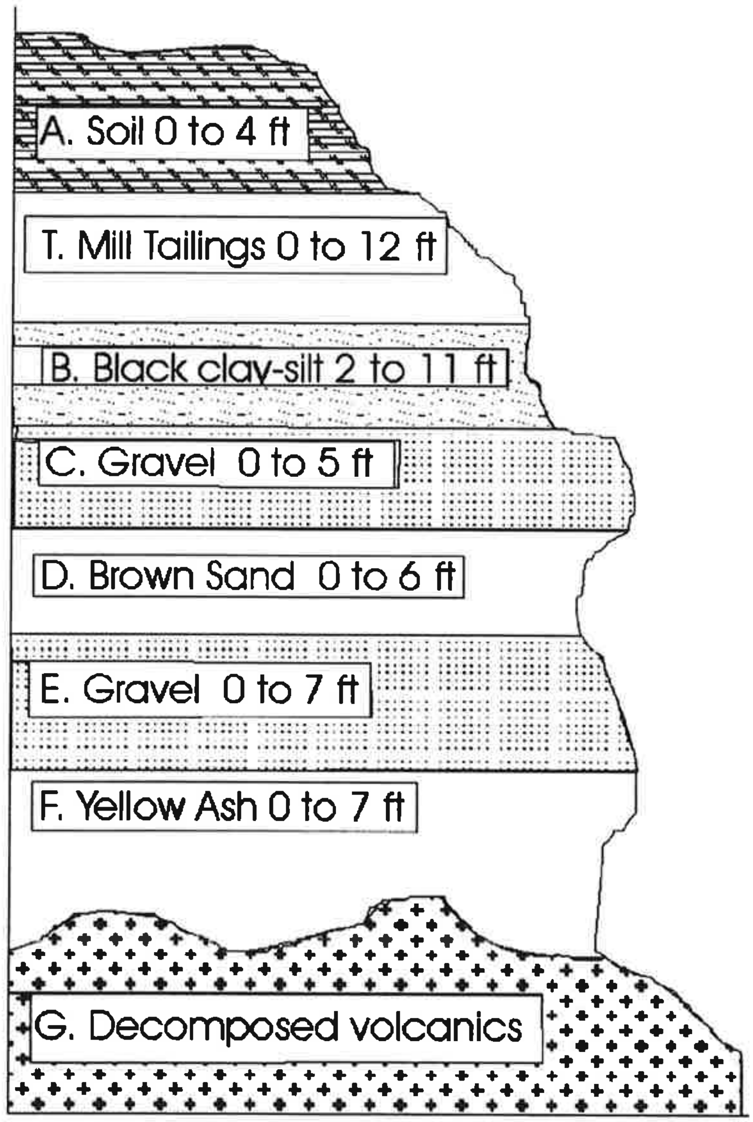


Figure 11.
Placer Stratigraphy

Material from the Knudson Bowl was then panned to a concentrate and placed in glass jars. These were taken to BLM's geology lab in Bakersfield. There we further concentrated the material to pure black sands, removed any visible gold larger than 0.5 mm.

B. Amalgamation

The remaining black sand was amalgamated with mercury per guidelines of BLM's Placer Examination Handbook. The results of this testing are summarized in **Appendix 19a**. We did not use fire assays to test the black sands, as did Galactic because that technique, while giving an indication of what gold may be present in the black sands, does not always indicate what gold can be recovered from the material. For that reason case law proscribes that fire assays not be used to evaluate placers (*U.S. v. San Juan Exploration Co.* A-30965 (March 27, 1969); *U.S. v. Bass* IBLA 113 (1972)). Following BLM procedure, we assume that amalgamation of the free gold in our placer samples reflects the expected recovery of gold that could be expected from these deposits.

Placer examination trench for Sample PL-39. On south side of Indian Hill, looking south.

C. Economic Analysis

1. Placer Gravels

Samples we collected and analyzed are illustrated on **Maps 17, 18 and 19**. The locations of samples shown one these maps were plotted to GIS files created from the field data (**Appendix 18, 19A and 19B**). We then produced isopac maps of each gravel and calculated volumes from those maps.

Three samples gave results over \$1.50 per cubic yard (loose):

Sample #10, Gravel C, \$1.69
Sample #28, Gravel C, \$3.87
Sample #42, Gravel C, \$3.55

There are two areas of Gravel C where gold values are highest (**Map 17**). The "West Area" has a 1.5 foot thick gravel layer with 8 feet of overburden. There are 855 cubic yards of gravel with a gold content averaging \$3.00 per cubic yard in place. Assuming a 20% swell factor (BLM Handbook for Mineral Examiners, Appendix IV-C and Placer Examination Principles and Practice, BLM Technical Bulletin 4, P. 191), the grade of in-place material would be \$3.75 per cubic yard.

The "East Area" has a 2.5 foot thick gravel layer with 10.5 feet of overburden. This area has 1,547 cubic yards of gravel with a gold content of \$3.00 per cubic yard in place.

The amount of gravel present within the Bodie Bowl with a gold concentration of over \$1.50 per ton amounts to only 2,400 cubic yards. Even using an exaggerated \$3.00 per cubic yard in gold value for this material, this calculates to be a resource valued at \$7,500.

The most economic small-scale placer operation we know of in California is the Old River 5 Placer Mine in Stanislaus County. That operation produces placer gold at a rate of 20,000 tons per day. It has an operating cost of \$3.50 per cubic yard. The Old River 5 Placer Mine has little or no overburden to contend with. Given the 8 to 10 feet of overburden on the placer deposits we studied, it is unlikely that any economic extraction of gold could be made from them. The \$7,500 resource would not pay for the permitting requirements in the Bodie Bowl, or for the used equipment (Back hoe, truck, wash plant) that would be needed to mine the resource.

If we assume that all of the "C" gravel has a gold concentration of \$3.50/bank cubic yard (bcy), then, from **Table 16**:

Au-bearing gravel	50,820 bcy
Overburden	135,520 bcy
Total	188,340 bcy

Au-bearing to Waste Ratio: 1:2.7

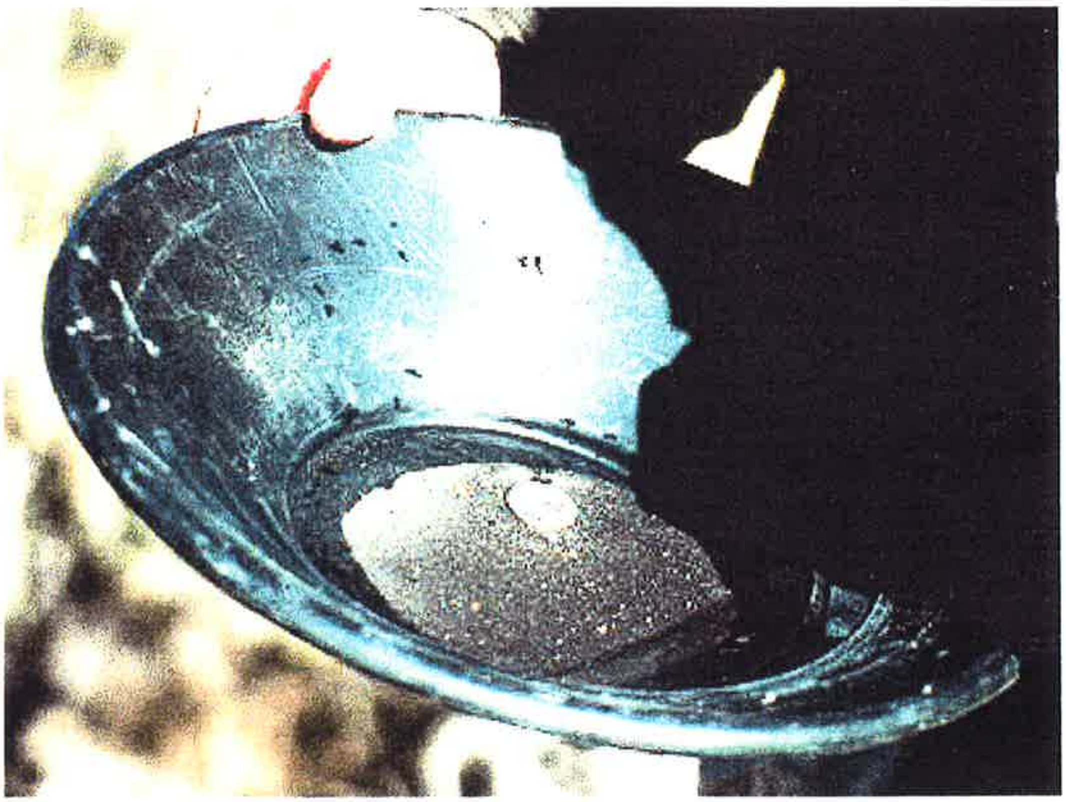
The excavating rate for common earth materials using a D-7 Caterpillar Tractor (300 h.p.) over a haul distance of 150 feet is 410 bcy per day.

If waste is moved at a rate of 300 bcy/day and Au-bearing material at 110 bcy/day, all of the "C" gravels could be removed in (1,883/3340) = 459 days, or about 1.7 years with 270 operating days per year.

The cost of operating a D-7 Caterpillar Tractor is \$1.76/bcy. (Means, 1997). So mining costs would be:

Au-bearing material:	1.0 bcy x \$1.76/bcy = \$1.76
Overburden:	2.7 bcy x \$1.76/bcy = \$3.52
Total:	\$5.28

Even if 100% recovery of gold could be expected from gravel "C", and even if all of it contained the highest measured concentration of gold (\$3.50 Au per bcy), it would not be economical to mine.



Placer gold dust, Bodie mining district. Sample PL-28.

2. Mill Tailings

The mill tailings we analyzed contained gold values of \$0.49 to \$0.05 per cubic yard. These values are too low for economic recovery.

PART IV: MILL SITE CLAIMS

There are two unpatented mill sites in the Bodie Bowl, the Parker Whitney Mill Site (CAMC 39217) and the Margie Mill Site (CAMC 39218), both owned by Lost Carcass and Buzzard Mining Company. These are defined by metes-and-bounds in the NW1/4, Sec. 9, T.4N., R.27E.. They do not have any structures on them. Parts of the mill sites have debris on them from past mining operations. The claimant indicated that these were stockpiles of ore for future mining operations. Stockpiling of ore is a legitimate use of a mill site (*Utah International, Inc.*, 36 IBLA 219, 225-226 (1976)) if the stockpiles have value above cut-off grade for the mining of the associated in-place mineral deposit.

PARKER-WHITNEY MILL SITE

The Parker-Whitney Mill site (**Maps 1 and Map 16**) has approximately 1.0 acre of stockpiled material averaging 0.078 oz Au/ton (**Appendix 11B,** samples 94-97). There is approximately 24,200 cubic yards of material on this claim, based on an average stockpile thickness of 15 feet. The stockpiled material contains about 2,500 ounces of gold. Since the stockpiled material is above the cut-off grade for the Bodie project, it is classified by us as valid on October 31, 1994.

MARGIE MILL SITE

The Margie Mill Site (**Maps 1 and Map 16**) has a small dump (5,000 cubic yards) of volcanic debris on it. Assays of this material were 0.014 oz Au/ton (**Appendix 11B,** samples 98).. Since this value is below our cut-off grade of 0.018 oz/ton, this mill site is classified by us as invalid on October 31, 1994.

PART V: LEGAL CONCEPTS OF DISCOVERY

INTRODUCTION

Several legal concepts are applicable to the evaluation of mining claims within the Bodie Bowl. These include exploration versus development, loss of discovery, discovery in each claim, maintaining a physical discovery and due diligence, prudence, marketability and geologic inference. An overview of these concepts is found in the BLM publication by the California State Office titled Location and Patenting of Mining Claims and Mill Sites in California, edited by James Evans, Special Publication, 1996.

The basis of all mining claim validity examination is the precedent set in *Castle v. Womble*, 1894. The pertinent part of this decision is known as the "Prudent Man" rule and reads as follows::

> "...where minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine, the requirements of the statue have been met. To hold otherwise would tend to make of little avail, if not entirely nugatory, that provision of the law whereby "all valuable mineral deposits in lands belonging to the United States...are...declared to be free and open to exploration and purchase." For, if as soon as minerals are shown to exist, and at any time during exploration, before the returns become remunerative, the lands are to be subject to other disposition, few would be found willing to risk time and capital in the attempt to bring to light and make available the mineral wealth, which lies concealed in the bowels of the earth, as Congress obviously must have intended the explorers should have proper opportunity to do..."

The important corollary to the "Prudent Man" rule is the "Marketability Test"set forth in *U.S. v. Colman*, 1968. The critical portion of this decision reads as follows:

> "...in determining whether a mineral deposit was valuable...the 'marketability test' was proper, and was a complement to the prudent man test'..."

Following these precedents, the question that this report answers is this: Based on available information, would a prudent person attempt to develop the Bodie deposits using available technology and mining practice with a reasonable prospect of economic success?

EXPLORATION VERSUS DEVELOPMENT

In order to establish discovery, it must be determined the mineral deposit can be mined at a profit and that development and mining operations may proceed with reasonable confidence. If the deposit requires additional exploration to delineate ore reserves and determine grade or tonnage before development may be stated, a discovery has not been made. In *Converse v. Udall*, 399 F2d (9th Cir 1968), *cert denied*, 393 US 1025 (1969), the Court affirmed the action of the Department of the Interior in drawing a sharp distinction between "exploration" for and "discovery" of a valuable mineral deposit. The court stated at 620 and 621:

> Converse attacks the Secretary for drawing a distinction between "exploration," "discovery," and "development." But the authorities we have cited show that there is a difference between "exploration" and "discovery." (See, e.g., *Cole v. Ralph*, supra, 252 US at 294, 296, 307, 40 S.Ct. 321.) If the latter word were taken literally, then the finding of any mineral would be a "discovery." Webster, 2d Ed., defines "discover" as "to make known the identity of,.. . by laying open to view, as a thing hidden or covered, to expose; to disclose; to bring to light." But, as we have seen, that alone is not enough. On the other hand, Webster defines "explore" as "to seek for or after, to strive to attain by search." This is exactly what a prospector does, both before he finds the first "indications... of the existence of lodes or veins" (*U.S. v. Iron Silver Mining Co.*, supra, 128 US at 683) and thereafter until he finds enough mineralization to meet the legal test of a discovery. It is true that some of the cited cases say that "development" and "exploration" mean the same thing (*Charlton v. Kelly*, supra, 156 F. at 436), or speak of "exploration" after discovery (*Lange v. Robinson*, supra, 148 F. at 804). But in each of these cases, the court was talking about further work to be done after a sufficient discovery had been made, work which could he called "exploration" or "further exploration," or could also be called "development." They do not support the attack here made upon the distinction between the exploration work which must necessarily be done before a discovery, and the discovery itself, which is what the Secretary talks about when he distinguishes between "exploration" and "discovery." The real question here is not whether there is such a distinction, but whether Converse's exploration had resulted in a legal discovery.

In *U.S. v. New Mexico Mines, Inc.*, 3 IBLA 101(1971), the Board offered the following definitions for "exploration," “discovery” and "development":

> "Exploration," within this context, is the process of searching for a valuable mineral deposit. The finding of mineralization of sufficient value to encourage further exploration does not successfully conclude the exploratory process or constitute a discovery.

> "Discovery." to paraphrase the definition in *Castle v. Womble*, occurs upon the finding of a mineral deposit revealed to be of sufficient qualitative and quantitative value to warrant the expenditure of effort to develop a mine in the reasonable anticipation that a profitable mining operation will result.
>
> "Development" refers to the physical work incident to the excavation of a mine for the extraction of the mineral values discovered. After discovery. certain exploratory activities incident to the actual production of the minerals are regarded as "development" rather than as "exploration." These would include the blocking out of the ore body, testing for engineering feasibility, determining the strike and dip of the vein beyond the extent of the qualifying knowledge, and related activities.

In *U.S. v. Lundy*, A-30724 (June 30, 1967), specific examples of exploration work are discussed by the Secretary:

> There is a clear distinction between "exploration' and "development" as they relate to discovery under the mining laws. The separate stages of mining activity serve as a basis for determine what further mining activity a prudent man would be justified in undertaking. Exploration work includes such activities as geophysical or geochemical prospecting, diamond drilling, sinking an exploratory shaft or driving an exploratory adit. It is that work which is done prior to a discovery in effort to determine whether the land is valuable for minerals. When inherently valuable minerals are found, it is often necessary to do further exploratory work to determine whether a valuable mineral deposit exists i.e., whether the minerals exist in such quality and quantity that there is a reasonable prospect of success in developing a paying mine.

LOSS OF DISCOVERY

Worked-out claims do not qualify as valid mining claims. Although a mining claim may have been valid in the past because of a discovery on the claim of a valuable deposit of mineral, the mining claim will lose its validity if the mineral deposit ceases to be valuable because of a change in economic conditions, or the mineral deposit is depleted (Maley, 1983, p.221).

DISCOVERY FOR EACH CLAIM

The discovery of mineral on one claim will not support rights to another claim or group of claims even though the claims are contiguous. *Ranchers Exploration & Development Co. v. Anaconda Co.*, 248 F. Supp. 708 (DC Utah 1965). Maley (1985, p. 223) summarizes the case law concerning this situation:

> In contest proceedings involving more than one claim, the of discovery is applied to each claim individually, since "(a) discovery without the limits of the claim, no matter what its proximity does not suffice." *Waskey v. Hammer*, 223 US 85, 91(1912). In order to be valid each claim in a claim group must have a discovery within its boundaries. However. under certain circumstances the government has taken a broad look at the requirement. For example, in the case of large, low-grade, porphyry copper deposits which by necessity require hundreds of claims to cover the mineralized area, it is obvious that any one claim could not stand by itself as a paying mine. The entire deposit must be available in order to be economically feasible. In acknowledging this fact, the government has issued mining patents on numerous such claims.

MAINTAINING A PHYSICAL DISCOVERY

The BLM manual (3891) outlines the requirements and procedures of a validity examination for the mineral examiner.

The manual at 3891.3G states:

> The mineral examiner may also request that the mining claimant drill confirmation holes, excavate sample pits, or use other means to verify a discovery made by previous work performed by the mining claimant upon the mining claim

The manual at 3891 .31H states:

> ...the mineral examiner must exercise the best professional judgment in selecting any other sample sites necessary to verify the discovery. Samples are taken only from points that are available and safe for examination. The mining claimant must be given the opportunity and a reasonable amount of time to correct unsafe conditions and reopen old workings if he believes that they must be sampled to verify the discovery.

These quotes from the manual address three critical issues regarding sampling at Bodie: 1) the professional judgement of the mineral examiners in selecting sample sites necessary to verify discovery 2) the mineral examiners safety during underground sampling and 3) the requirement that the claimant must keep the discovery points open.

Numerous Interior Board of Land Appeals cases directly address these issues. The decision found in *United States v Pool,* 78 IBLA 215 (1984) in part states:

> The sole function of a Government mineral examiner in examining a mining claim is to verify whether the mining claimant has, in fact, found a valuable mineral deposit. He has no obligation to explore or sample beyond those areas which have been exposed by the claimant...

It is only the mineral examiners professional judgement that can guide where to take samples when the mining claimant either refuses, or can not point out the discovery for each claim. For the case at Bodie every claimant had been notified by certified mail that we were conducting this investigation, yet none had chosen to accompany us during our examinations, except on two occasions: William Boynton met with Gregg Wilkerson and walked over the claims on Bodie Bluff and Standard Hill on June 15, 1995. As part of a county board of supervisor's field trip, Patricia Cain met with BLM geologists while we were performing placer testing on October 17, 1996. This situation has been somewhat analogous to that described in *United States v. Lang,* 3 IBLA 108 (1971):

> Claimants who challenge a mineral examiner to discover the alleged valuable mineral deposit for himself assume the risk that he may not be able to do so.

The mineral examiner's safety during underground sampling is tied to the requirement that the claimant must keep the discovery points open. Two cases are illustrative of this.

United States v Pool, 78 IBLA, 215 (1984) states:

> ...a claimant is expected to keep his workings available for inspection. Thus, if a claimant contends that the values can be found at depth, but the shaft is either caved or cannot safely be entered, the mineral examiner has no obligation to either imperil himself or retimber the shaft.

In *United States v. Hess,* 46 IBLA 1, 5 (No. 1) (1980) the Board said:

> Just as a mineral examiner is not required to enter an unsafe adit, so too, an examiner is not obligated to examine claims which are inaccessible. It is the claimant's responsibility to provide safe access to mining claims.

Finally there is the situation where safe mine workings of discovery points where allowed to degrade. It has been clearly stated by the Board in numerous cases that the claimant must not allow his discovery points to degrade. These following two citations are representative. In *United States v. Bechthold,* 25 IBLA 77, 84 (1976) the Board stated:

> It is well established that the Government has no obligation to do the discovery work for the mining claimant or to do more than simply examine the claim to verify whether there is a discovery of a valuable mineral deposit located within its limits. To drill or otherwise establish the existence and extent of a mineral deposit sufficient to meet the prudent man test of discovery is the obligation of the mining claimant.

Furthermore, in *United States v. Cook,* 71 IBLA 268, 270 (1983):

> Mineral examiners are not required to blast or do any extensive discovery work beyond the workings exposed by the claimants in order to satisfy the Government's prima facie burden. It is incumbent upon a mining claimant to keep his discovery points available for inspection by Government mineral examiners. Where he does not, he assumes the risk that the mineral examiner will not be able to very the discovery of the alleged mineral deposit.

DUE DILIGENCE

If mining claimants have held claims for several years and have attempted little or no development or operations, a presumption is raised that the claimants have failed to discover valuable mineral deposits or that the market value of discovered minerals was not sufficient to justify the costs of extraction, *U. S. v. Zweifel*, 503 F2d. 1150 (1975)

In *U. S. v. Hess*, 46 IBLA 1 (February 13, 1980) the board quoted *Zweifel, supra* and concluded "That the failure to develop claims over a period of years gives rise to a presumption is clear" the decision went on to state:

> Finally, we turn to the question whether the absence of development, over a considerable period of time, may serve to establish a prima facie case of invalidity. We are fully cognizant of the thesis that production is not a precondition of establishing a discovery of a valuable mineral deposit. But it is too late to gainsay the proposition that the failure to produce gives rise to a presumption of invalidity. The question which is presented is whether this presumption rises to the level of a prima facie case. We believe that this question must be answered in the affirmative.
>
> Proof of non-development over a period of time may serve as an independent basis for determining a claim's invalidity where it stands uncontradicted by any relevant evidence. Thus, proof of the fact of non-development may also serve to establish the Government's prima facie case.

In *U S. v. Rosenberger*, 71 IBLA 195 (March 14, 1983) the board stated:

> This department and the courts have long held that where, over a sustained period of several years, the claimant has failed to engage in productive extraction of mineral from the claim, a presumption is raised that there has been no discovery of a valuable mineral deposit or that the market value of discovered minerals was not sufficient to justify the costs of extraction, which presumption is, of itself, adequate to constitute a prima fade case of the claim's invalidity.

GEOLOGIC INFERENCE

Estimates of ore reserves for validity examinations are based on geologic inference when discovery is identified by a physical exposure somewhere on each claim. Case law is contained *in U.S. v. Lundy*, A-30724 (1967); *U.S. v. Marion*, 37 IBLA 75 (1978); *U.S. v. Watkins and Barton*, A-30659 (1967); *U.S. v. Edeline*, 39 IBLA 241 (1979); *U.S. v. Hooker*, 48 IBLA 30 (1980); *U.S. v. New Park Mining Co.*, A-28530 (1961); and *U.S. v. Milisich* A-30720 (1967). Of particular interest for this examination was *Hooker* which discussed the distinctions between indicated reserves, measured reserves and inferred resources. We have verified the physical exposure of ore-grade mineralization on six lode claims (**Maps 10, 16a, 16b, Table 16**). The process of extrapolation of these data point to areas of the claim between drill holes, mine adits and surface sample sites is an appropriate practice, as long as each claim has at least one physical discovery point accessible to the mineral examiner. The extent to which this extrapolation takes place must be conduced in a manner consistent with standard industrial practices performed by a person of ordinary prudence. We do not have a physical exposure for every ore block which we analyzed in construction of our mine model. We do have at least one physical exposure, by way of a surface or sub-surface (mine working or drilling interval) which exceeds cut-off grade for each claim encompassed by one or more of the open pits in our mine model. We think that this geologic inference is reasonably applied and would be made by any prudent person. Itemization of discovery sites for each claim identified as valid by this investigation is made in **Summary Table, page 6.**

A. Transit Claim

The Transit lode mining claim (CAMC 039099, **Appendix 1,** page 100) is at the extreme southern end of the mineable area shown on **Map 16.** The northern 500 feet of this claim lies within the hypothetical mine pit as created using the Techbase computer program (as analyzed by BLM geologist Larry Vredenburgh). We know of no surface (**Map 15b**), underground working, or drilling interval on this narrow claim that we can identify as a physical discovery for that claim. However, since the claim lies within our measured minable reserves, a prudent person would be justify in mining it by reason of geologic inference. It is therefore classified as valid in this investigation.

PART VI: REFERENCES

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APPENDIX 1
UNPATENTED MINING CLAIMS IN THE BODIE BOWL

BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC039090*	LD	09	A: 8.4 U: 0.0	TEXAS	J S CAINCO	1500x600:07/02/1927
CAMC039091*	LD	09	A: 17.1 U: 0.0	VINDICATOR	J S CAINCO	1500x600:07/02/1927
CAMC039092*	LD	09,10	A: 21.1 U: 0.0	ATLAS	J S CAIN CO	1500x600:11/30/1930
CAMC039093*	LD	16	A: 12.3 U: 0.0	SOUTH CHAMPION	J S CAIN CO	1500x600:08/08/1955
CAMC039094*	LD	09,16	A: 7.6 U: 0.0	BELVIDERE	J S CAIN CO	1450x230:06/06/1924
CAMC039095*	LD	16	A: 18.2 U: 0.0	SOUTH STANDARD	J S CAIN CO	1500x600:08/31/1955
CAMC039096*	LD	09,16	A: 8.8 U: 0.0	GEORGIA	J S CAIN CO	1500x600:07/01/1927
CAMC039097*	LD	09,10, 16	A: 20.0 U: 0.0	KATHERINE	J S CAIN CO	1450x600:11/27/1930
CAMC039098*	LD	16	A: 14.5 U: 0.0	CHAMPION NO 2	J S CAIN CO	1200X450:01/01/1905
CAMC039099*	LD	09,16	A: 0.6 U: 0.0	TRANSIT	J S CAIN CO	1400x600:10/27/1897
CAMC039101*	PL	16	A: 129.4 U: 32.2	AURORA ASSOC	J S CAIN CO	ALQ PTS:01/10/1928
CAMC039103*	LD	09	A: 0.8 U: 0.0	ZEUS #80	J S CAIN CO	900x300:04/05/1968
CAMC039104*	LD	16	A: 4.0 U: 0.0	ZEUS #81	J S CAIN CO	600x400:04/05/1968
CAMC039105*	LD	16	A: 17.5 U: 0.0	ZEUS #82	J S CAIN CO	1400x600:04/04/1968
CAMC039106*	LD	16	A: 4.2 U: 0.0	ZEUS #83	J S CAIN CO	1200x200:04/05/1968
CAMC039107*	LD	16	A: 12.6 U: 0.0	ZEUS #84	J S CAIN CO	1200x500:04/04/1968
CAMC039108*	LD	16	A: 9.0 U: 0.0	ZEUS #86	J S CAIN CO	1400x600:04/04/1968
CAMC039109*	LD	16	A: 9.2 U: 0.0	ZEUS #87	J S CAIN CO	680x600:04/24/1968

APPENDIX 1
UNPATENTED MINING CLAIMS IN THE BODIE BOWL

BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC039110*	LD	16,17	A: 13.7 U: 0.0	ZEUS #88	J S CAIN CO	1300x600:04/04/1968
CAMC039111*	LD	16,17	A: 16.8 U: 0.0	ZEUS #89	J S CAIN CO	1500X600:04/04/1968
CAMC039112*	LD	20,21	A: 18.3 U: 0.0	ZEUS #90	J S CAIN CO	1500x600:04/05/1968
CAMC039113*	LD	21	A: 2.4 U: 0.0	ZEUS #91	J S CAIN CO	1000x200:04/05/1968
CAMC039114*	LD	21	A: 5.4 U: 0.0	ZEUS #92	J S CAIN CO	900x600:04/05/1968
CAMC039115*	LD	16	A: 14.9 U: 0.0	ZEUS #93	J S CAIN CO	1100x600:04/05/1968
CAMC039116*	LD	16	A: 2.7 U: 0.0	ZEUS #94	J S CAIN CO	500x300:04/05/1968
CAMC039117*	LD	16	A: 12.3 U: 0.0	ZEUS #96	J S CAIN CO	1000x600:04/05/1968
CAMC039118*	LD	09	A: 3.7 U: 0.0	ZEUS #97	J S CAIN CO	800x600:04/05/1968
CAMC039119*	LD	09	A: 8.4 U: 0.0	ZEUS #99	J S CAIN CO	1500x300:04/05/1968
CAMC039120	LD	09	A: 0.0 U: 20.0	ZEUS #120	J S CAIN CO	1500x600:04/04/1968
CAMC039121*	LD	09	A: 1.0 U: 18.7	ZEUS #122	J S CAIN CO	1500x600:03/13/1968
CAMC039122*	LD	09	A: 17.1 U: 2.6	ZEUS #123	J S CAIN CO	1500x600:03/13/1968
CAMC039123*	LD	09	A: 10.2 U: 9.8	ZEUS #124	J S CAIN CO	1500x600:03/13/1968
CAMC039124*	LD	09	A: 20.1	ZEUS #125	J S CAIN CO	1500x600:03/13/1968
CAMC039125*	LD	09	A: 17.6 U: 2.1	ZEUS #126	J S CAIN CO	1500x600:03/13/1968
CAMC039126*	LD	09	A: 19.8 U: 0.0	ZEUS #127	J S CAIN CO	1500x600:03/13/1968
CAMC039127*	LD	09	A: 19.9 U: 0.0	ZEUS #128	J S CAIN CO	1500x600:03/22/1968

APPENDIX 1
UNPATENTED MINING CLAIMS IN THE BODIE BOWL

BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC039128*	LD	09	A: 19.7 U: 0.0	ZEUS #130	J S CAIN CO	1500x600:03/22/1968
CAMC039129*	LD	09	A: 20.0 U: 0.0	ZEUS #132	J S CAIN CO	1500X600:03/13/1968
CAMC039130*	LD	09	A: 11.6 U: 0.0	ZEUS #133	J S CAIN CO	1500x600:03/13/1968
CAMC039131*	LD	09	A: 19.8 U: 0.0	ZEUS #134	J S CAIN CO	1500x600:03/13/1968
CAMC039132*	LD	09	A: 19.8 U: 0.0	ZEUS #135	J S CAIN CO	1500x600:03/13/1968
CAMC039133*	LD	10	A: 18.6 U: 1.3	ZEUS #136	J S CAIN CO	1500x600:03/13/1968
CAMC039134*	LD	10	A: 20.1 U: 0.0	ZEUS #137	J S CAIN CO	1500x600:03/13/1968
CAMC039135*	LD	10	A: 9.6 U: 10.1	ZEUS #138	J S CAIN CO	1500x600:03/13/1968
CAMC039136*	LD	10	A: 19.9 U: 0.0	ZEUS #139	J S CAIN CO	1500x600:03/13/1968
CAMC039137*	LD	10	A: 1.0 U: 18.6	ZEUS #140	J S CAIN CO	1500x600:03/13/1968
CAMC039138*	LD	10	A: 19.5 U: 0.3	ZEUS #141	J S CAIN CO	1500x600:03/13/1968
CAMC039139	LD	10	A: 0.0 U: 19.8	ZEUS #142	J S CAIN CO	1500x600:03/13/1968
CAMC039140*	LD	10	A: 16.0 U: 3.9	ZEUS #143	J S CAIN CO	1500x600:03/13/1968
CAMC039141*	LD	09,16	A: 16.3 U: 0.0	ZEUS #197	J S CAIN CO	1500x600:03/22/1968
CAMC039142*	LD	09,16	A: 19.8 U: 0.0	ZEUS #199	J S CAIN CO	1500x600:03/22/1968
CAMC039143*	LD	10	A: 18.8 U: 0.0	ZEUS #200	J S CAIN CO	1500x600:03/11/1968
CAMC039144*	LD	10,15	A: 20.0 U: 0.0	ZEUS #201	J S CAIN CO	1500x600:03/11/1968
CAMC039145*	LD	10	A: 18.6 U: 0.0	ZEUS #202	J S CAIN CO	1500x600:03/11/1968

APPENDIX 1
UNPATENTED MINING CLAIMS IN THE BODIE BOWL

BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC039146*	LD	10,15	A: 19.8 U: 0.0	ZEUS #203	J S CAIN CO	1500x600:03/11/1968
CAMC039147*	LD	10	A: 18.6 U: 0.0	ZEUS #204	J S CAIN CO	1500x600:03/11/1968
CAMC039148*	LD	10,15	A: 19.9 U: 0.0	ZEUS #205	J S CAIN CO	1500x600:03/11/1968
CAMC039149*	LD	10	A: 18.6 U: 0.0	ZEUS #206	J S CAIN CO	1500x600:03/11/1968
CAMC039150*	LD	10,15	A: 19.9 U: 0.0	ZEUS #207	J S CAIN CO	1500x600:03/11/1968
CAMC039151*	LD	16	A: 20.0 U: 0.0	ZEUS #256	J S CAIN CO	1500x600:03/22/1968
CAMC039152*	LD	16	A: 18.6 U: 1.4	ZEUS #257	J S CAIN CO	1500x600:03/22/1968
CAMC039153*	LD	16	A: 19.9 U: 0.0	ZEUS #258	J S CAIN CO	1500x600:03/12/1968
CAMC039154*	LD	16	A: 10.4 U: 9.4	ZEUS #259	J S CAIN CO	1500x600:03/08/1968
CAMC039155*	LD	16	A: 19.2 U: 0.9	ZEUS #260	J S CAIN CO	1500x600:03/12/1968
CAMC039156*	LD	09	A: 1.2 U: 18.9	ZEUS #261	J S CAIN CO	1500x600:03/13/1968
CAMC039157*	LD	16	A: 14.5 U: 5.3	ZEUS #262	J S CAIN CO	1500x600:03/12/1968
CAMC039158	LD	16	A: 0.0 U: 19.8	ZEUS #263	J S CAIN CO	1500x600:03/12/1968
CAMC039159*	LD	15,16	A: 14.9 U: 5.2	ZEUS #264	J S CAIN CO	1500x600:03/12/1968
CAMC039160	LD	15,16	A: 0.0 U: 20.1	ZEUS #265	J S CAIN CO	1500x600:03/12/1968
CAMC039161*	LD	15	A: 14.4 U: 5.4	ZEUS #266	J S CAIN CO	1500x600:03/12/1968
CAMC039162	LD	15	A: 0.0 U: 19.8	ZEUS #267	J S CAIN CO	1500x600:03/12/1968
CAMC039163*	LD	15	A: 14.3 U: 5.7	ZEUS #268	J S CAIN CO	1500x600:03/12/1968

APPENDIX 1
UNPATENTED MINING CLAIMS IN THE BODIE BOWL

BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC039164	LD	15	A: 0.0 U: 20.0	ZEUS #269	J S CAIN CO	1500x600:03/12/1968
CAMC039165	LD	17,20	A: 0.0 U: 20.2	ZEUS #301	J S CAIN CO	1500x600:03/05/1968
CAMC039166	LD	17,20	A: 0.0 U: 20.2	ZEUS #303	J S CAIN CO	1500x600:03/05/1968
CAMC039167	LD	17,20	A: 0.0 U: 19.7	ZEUS #305	J S CAIN CO	1500x600:03/05/1968
CAMC039168*	LD	17,20	A: 9.0 U: 10.9	ZEUS #307	J S CAIN CO	1500x600:03/05/1968
CAMC039169*	LD	17	A: 20.1 U: 0.0	ZEUS #308	J S CAIN CO	1500x600:04/04/1968
CAMC039170*	LD	17,20	A: 20.2 U: 0.0	ZEUS #309	J S CAIN CO	1500x600:03/22/1968
CAMC039171*	LD	16,21	A: 18.1 U: 0.0	ZEUS #315	J S CAIN CO	1500x600:03/22/1968
CAMC039172*	LD	16	A: 19.9 U: 0.0	ZEUS #316	J S CAIN CO	1500x600:03/08/1968
CAMC039173*	LD	16,21	A: 16.7 U: 3.2	ZEUS #317	J S CAIN CO	1500x600:03/08/1968
CAMC039174*	LD	16	A: 9.2 U: 10.7	ZEUS #318	J S CAIN CO	1500x600:03/08/1968
CAMC039175	LD	16,21	A: 0.0 U: 20.0	ZEUS #319	J S CAIN CO	1500x600:03/08/1968
CAMC039176*	LD	16	A: 0.6 U: 19.3	ZEUS #320	J S CAIN CO	1500x600:03/08/1968
CAMC039177	LD	16,21	A: 0.0 U: 20.1	ZEUS #321	J S CAIN CO	1500x600:03/08/1968
CAMC039178	LD	16	A: 0.0 U: 19.7	ZEUS #322	J S CAIN CO	1500x600:03/08/1968
CAMC039179	LD	16,21	A: 0.0 U: 19.7	ZEUS #323	J S CAIN CO	1500x600:03/08/1968
CAMC039180	LD	16	A: 0.0 U: 20.1	ZEUS #324	J S CAIN CO	1500x600:03/08/1968
CAMC039181	LD	16,21	A: 0.0 U: 20.2	ZEUS #325	J S CAIN CO	1500x600:03/08/1968

APPENDIX 1
UNPATENTED MINING CLAIMS IN THE BODIE BOWL

BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC039182	LD	16	A: 0.0 U: 19.7	ZEUS #326	J S CAIN CO	1500x600:03/18/1968
CAMC039183	LD	16,21	A: 0.0 U: 19.7	ZEUS #327	J S CAIN CO	1500x600:03/18/1968
CAMC039184	LD	15,16	A: 0.0 U: 20.1	ZEUS #328	J S CAIN CO	1500x600:03/18/1968
CAMC039185	LD	15,16 21,22	A: 0.0 U: 20.1	ZEUS #329	J S CAIN CO	1500x600:03/13/1968
CAMC039186	LD	15	A: 0.0 U: 19.8	ZEUS #330	J S CAIN CO	1500x600:03/18/1968
CAMC039187	LD	15,22	A: 0.0 U: 19.8	ZEUS #331	J S CAIN CO	1500x600:03/18/1968
CAMC039188	LD	15	A: 0.0 U: 20.0	ZEUS #332	J S CAIN CO	1500x600:03/18/1968
CAMC039189	LD	20	A: 0.0 U: 20.5	ZEUS #364	J S CAIN CO	1500x600:03/05/1968
CAMC039190	LD	20	A: 0.0 U: 20.3	ZEUS #365	J S CAIN CO	1500x600:03/05/1968
CAMC039191	LD	20	A: 0.0 U: 20.3	ZEUS #366	J S CAIN CO	1500x600:03/05/1968
CAMC039192	LD	20	A: 0.0 U: 20.1	ZEUS #367	J S CAIN CO	1500x600:03/05/1968
CAMC039193	LD	20	A: 0.0 U: 19.9	ZEUS #368	J S CAIN CO	1500x600:03/05/1968
CAMC039194	LD	20	A: 0.0 U: 19.8	ZEUS #369	J S CAIN CO	1500x600:03/05/1968
CAMC039195*	LD	20	A: 9.4 U: 10.6	ZEUS #370	J S CAIN CO	1500x600:03/05/1968
CAMC039196*	LD	20	A: 1.3 U: 18.5	ZEUS #371	J S CAIN CO	1500x600:03/05/1968
CAMC039197*	LD	20	A: 20.3	ZEUS #372	J S CAIN CO	1500x600:03/05/1968
CAMC039198*	LD	20	A: 15.8 U: 4.2	ZEUS #373	J S CAIN CO	1500x600:03/05/1968
CAMC039199*	LD	20,21	A: 20.1 U: 0.0	ZEUS #375	J S CAIN CO	1500x600:03/22/1968

APPENDIX 1
UNPATENTED MINING CLAIMS IN THE BODIE BOWL

BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC039200*	LD	21	A: 20.0 U: 0.0	ZEUS #376	J S CAIN CO	1500x600:03/05/1968
CAMC039201*	LD	21	A: 19.0 U: 0.0	ZEUS #377	J S CAIN CO	1500x600:03/05/1968
CAMC039202*	LD	21	A: 20.0 U: 0.0	ZEUS #378	J S CAIN CO	1500x600:03/05/1968
CAMC039203*	LD	21	A: 19.8 U: 0.0	ZEUS #379	J S CAIN CO	1500x600:03/05/1968
CAMC039204*	LD	21	A: 19.3 U: 0.6	ZEUS #380	J S CAIN CO	1500x600:03/05/1968
CAMC039205*	LD	21	A: 19.9 U: 0.0	ZEUS #381	J S CAIN CO	1500x600:03/05/1968
CAMC039206*	LD	21	A: 2.6 U: 17.3	ZEUS #382	J S CAIN CO	1500x600:03/05/1968
CAMC039207*	LD	21	A: 14.2 U: 5.5	ZEUS #383	J S CAIN CO	1500x600:03/05/1968
CAMC039208	LD	21	A: 0.0 U: 20.2	ZEUS #384	J S CAIN CO	1500x600:03/05/1968
CAMC039209	LD	21	A: 0.0 U: 20.0	ZEUS #385	J S CAIN CO	1500x600:03/05/1968
CAMC039210*	LD	09	A: 18.8	BLUE POINT	BODIE CONSOL HOMESTAKE	1500x600:07/01/1927
CAMC039211*	LD	09,10	A: 1.0 U: 0.0	BLUE POINT N EXT	BODIE CONS. HOMESTAKE	1500x600:07/01/1927
CAMC039212*	LD	09,16	A: 1.0 U: 0.0	CONS. PACIFIC	BODIE CONS. HOMESTAKE	1500x600:03/19/1901
CAMC039213*	LD	09,10	A: 20.6 U: 0.0	MORNING STAR	LOST CARCASS & BUZZARD	1500x600:08/16/1971
CAMC039214*	LD	09,10	A: 20.7 U: 0.0	ANTOC	LOST CARCASS & BUZZARD	1500x600:1/22/1939
CAMC039215*	LD	09,10	A: 20.5 U: 0.0	TIOGA NORTH	LOST CARCASS & BUZZARD	1500x600:06/17/1976
CAMC039216*	LD	09	A: 20.5 U: 0.0	OCEOLA NORTH	LOST CARCASS & BUZZARD	1500x600:06/17/1976
CAMC039217*	MS	09,10	A: 4.8 U: 0.0	MARGIE MILLSITE	LOST CARCASS & BUZZARD	550x400:06/17/1976

APPENDIX 1
UNPATENTED MINING CLAIMS IN THE BODIE BOWL

BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC039218*	MS	09,10	A: 6.8 U: 0.0	PARKER WHITNEY	LOST CARCASS & BUZZARD	450x600:06/17/1976
CAMC071918*	LD	16	A: 11.3 U: 0.0	ZEUS #85	BODIE CONS. HOMESTAKE	1000x600:08/04/1980
CAMC117665*	LD	09	A: 7.9 U: 0.0	CENTRAL PACIFIC	BODIE CONS. HOMESTAKE	1500x600:09/01/1982
CAMC117666*	LD	09	A: 7.3 U: 0.0	UNION PACIFIC	BODIE CONS. HOMESTAKE	1500x600:09/01/1982
CAMC117667*	LD	16	A: 1.3 U: 0.0	TRUST	BODIE CONS. HOMESTAKE	1500x600:09/01/1982
CAMC151953*	LD	09	A: 13.4 U: 0.0	ZEUS #86A	BODIE CONS. HOMESTAKE	1000x600:05/14/1984
CAMC182621*	LD	10	A: 19.0 U: 0.0	NLM #1	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182622*	LD	10	A: 18.0 U: 2.0	NLM #2	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182623*	LD	10	A: 19.1 U: 0.0	NLM #3	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182624*	LD	15	A: 8.5 U: 11.7	NLM #4	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182625*	LD	15	A: 10.9 U: 9.1	NLM #5	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182626	LD	15	A: 0.0 U: 20.1	NLM #6	BODIE CONS. HOMESTAKE	1500x600:6/11/1986
CAMC182627*	LD	15	A: 1.2 U: 18.9	NLM #7	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182628	LD	15	A: 0.0 U: 20.1	NLM #8	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182629	LD	15	A: 0.0 U: 20.4	NLM #9	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182630	LD	15	A: 0.0 U: 20.5	NLM #10	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182631	LD	15	A: 0.0 U: 20.5	NLM #11	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182632	LD	15	A: 0.0 U: 20.4	NLM #12	BODIE CONS. HOMESTAKE	1500x600:06/11/1986

APPENDIX 1
UNPATENTED MINING CLAIMS IN THE BODIE BOWL

BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC182633	LD	15	A: 0.0 U: 19.8	NLM #13	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182634	LD	15	A: 0.0 U: 19.9	NLM #14	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182635	LD	14,15	A: 0.0 U: 20.1	NLM #15	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182636	LD	14,15	A: 0.0 U: 20.1	NLM #16	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182637	LD	14	A: 0.0 U: 20.1	NLM #17	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182638	LD	14	A: 0.0 U: 20.2	NLM #18	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182639	LD	14	A: 0.0 U: 20.0	NLM #19	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182640	LD	14	A: 0.0 U: 20.1	NLM #20	BODIE CONS.	1500x600:06/11/1986
CAMC182641	LD	14	A: 0.0 U: 15.0	NLM #21	BODIE CONS.	1500x600:06/11/1986
CAMC182642	LD	14	A: 0.0 U: 20.5	NLM #22	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182643	LD	14	A: 0.0 U: 14.8	NLM #23	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182644	LD	14	A: 0.0 U: 20.3	NLM #24	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182645	LD	14	A: 0.0 U: 14.7	NLM #25	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182646	LD	14	A: 0.0 U: 20.1	NLM #26	BODIE CONS.	1500x600:06/11/1986
CAMC182647	LD	15,22	A: 0.0 U: 20.2	NLM #27	BODIE CONS.	1500x600:06/11/1986
CAMC182648	LD	15,22	A: 0.0 U: 20.1	NLM #28	BODIE CONS. HOMESTAKE.	1500x600:06/11/1986
CAMC182649	LD	15,22	A: 0.0 U: 20.6	NLM #29	BODIE CONS. HOMESTAKE	1500x600:06/11/1986

APPENDIX 1
UNPATENTED MINING CLAIMS IN THE BODIE BOWL

BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC182650	LD	15,22	A: 0.0 U: 20.4	NLM #30	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182651	LD	22	A: 0.0 U: 20.3	NLM #31	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182652	LD	15,22	A: 0.0 U: 19.9	NLM #32	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182653	LD	22	A: 0.0 U: 20.0	NLM #33	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182654	LD	14,15	A: 0.0 U: 20.1	NLM #34	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182655	LD	22,23	A: 0.0 U: 20.2	NLM #35	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182656	LD	14	A: 0.0 U: 20.2	NLM #36	BODIE CONS.	1500x600:06/11/1986
CAMC182657	LD	23	A: 0.0 U: 20.2	NLM #37	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182658	LD	14	A: 0.0 U: 20.1	NLM #38	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182659	LD	23	A: 0.0 U: 20.2	NLM #39	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182660	LD	14	A: 0.0 U: 20.5	NLM #40	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182661	LD	14	A: 0.0 U: 20.3	NLM #41	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC182662	LD	14,23	A: 0.0 U: 20.2	NLM #42	BODIE CONS. HOMESTAKE	1500x600:06/11/1986
CAMC185207*	LD	21,28	A: 21.3 U: 0.0	WILD ROSE NO 1	GREG FIRMAN	1500x600:10/08/1986
CAMC185210*	LD	20,21 28,29	A: 4.3 U: 15.7	WILD ROSE NO 5	GREG FIRMAN	1500x600:10/14/1986
CAMC185211*	LD	21,28	A: 16.2 U: 4.4	WILD ROSE NO 7	GREG FIRMAN	1500x600:10/08/1986
CAMC185212*	LD	21,28	A: 20.5 U: 0.6	WILD ROSE NO 7W	GREG FIRMAN	1500x600:10/08/1986
CAMC210883	LD	04	A: 0.0 U: 18.2	GSI 16	BODIE CONS.	1450x550:06/04/1988

APPENDIX 1
UNPATENTED MINING CLAIMS IN THE BODIE BOWL

BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC210884	LD	04	A: 0.0 U: 17.6	GSI 17	BODIE CONS.	1450x550:06/04/1988
CAMC210885	LD	04	A: 0.0 U: 18.4	GSI 18	BODIE CONS.	1450x550:06/04/1988
CAMC210886	LD	04	A: 0.0 U: 16.7	GSI 19	BODIE CONS.	1450x550:06/04/1988
CAMC210887	LD	03,04	A: 0.0 U: 18.0	GSI 20	BODIE CONS.	1450x550:06/04/1988
CAMC210900	LD	04	A: 0.0 U: 17.0	GSI 45	BODIE CONS.	1450x550:06/04/1988
CAMC210901	LD	04	A: 0.0 U: 18.0	GSI 46	BODIE CONS.	1450x550:06/04/1988
CAMC210902	LD	04	A: 0.0 U: 18.3	GSI 47	BODIE CONS.	1450x550:06/04/1988
CAMC210903	LD	04	A: 0.0 U: 18.2	GSI 48	BODIE CONS.	1450x550:06/04/1988
CAMC210904	LD	04	A: 0.0 U: 17.6	GSI 49	BODIE CONS.	1450x550:06/04/1988
CAMC210905	LD	04	A: 0.0 U: 18.3	GSI 50	BODIE CONS.	1450x550:06/04/1988
CAMC210906	LD	04	A: 0.0 U: 16.8	GSI 51	BODIE CONS.	1450x550:06/04/1988
CAMC210907	LD	04	A: 0.0 U: 18.0	GSI 52	BODIE CONS.	1450x550:06/04/1988
CAMC210908	LD	03	A: 0.0 U: 18.2	GSI 53	BODIE CONS.	1450X550:06/04/1988
CAMC210932	LD	04	A: 0.0 U: 16.9	GSI 77	BODIE CONS.	1450x550:06/04/1988
CAMC210933	LD	04	A: 0.0 U: 18.0	GSI 78	BODIE CONS.	1450x550:06/03/1988
CAMC210934	LD	04	A: 0.0 U: 18.2	GSI 79	BODIE CONS.	1450x550:06/03/1988
CAMC210935	LD	04	A. 0.0 U: 18.0	GSI 80	BODIE CONS.	1450x550:06/03/1988
CAMC210936	LD	04	A: 0.0 U: 17.5	GSI 81	BODIE CONS.	1450x550:06/03/1988

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BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC210937	LD	04	A: 0.0 U: 17.9	GSI 82	BODIE CONS.	1450x550:06/03/1988
CAMC210938	LD	04	A: 0.0 U: 16.9	GSI 83	BODIE CONS.	1450x550:06/03/1988
CAMC210939	LD	04	A: 0.0 U: 17.8	GSI 84	BODIE CONS.	1450x550:06/03/1988
CAMC210940	LD	03	A: 0.0 U: 18.3	GSI 85	BODIE CONS.	1450x550:06/03/1988
CAMC210941	LD	03	A: 0.0 U: 17.0	GSI 86	BODIE CONS.	1450x550:06/03/1988
CAMC210942	LD	03	A: 0.0 U: 17.2	GSI 87	BODIE CONS.	1450x550:06/03/1988
CAMC210962	LD	05,08	A: 0.0 U: 18.3	GSI 107	BODIE CONS.	1450x550:06/04/1988
CAMC210963	LD	05,08	A: 0.0 U: 17.6	GSI 108	BODIE CONS.	1450x550:06/04/1988
CAMC210964	LD	04,05 08,09	A: 0.0 U: 17.8	GSI 109	BODIE CONS.	1450x550:06/04/1988
CAMC210965	LD	09	A: 0.0 U: 17.2	GSI 110	BODIE CONS.	1450x550:06/04/1988
CAMC210966	LD	09	A: 0.0 U: 17.6	GSI 111	BODIE CONS.	1450x550:06/04/1988
CAMC210967	LD	09	A: 0.0 U: 18.8	GSI 112	BODIE CONS.	1450x550:06/04/1988
CAMC210968	LD	04,09	A: 0.0 U: 18.8	GSI 113	BODIE CONS.	1450x550:06/04/1988
CAMC210969*	LD	04,09	A: 3.2 U: 15.4	GSI 114	BODIE CONS.	1450x550:06/03/1988
CAMC210970*	LD	04,09	A: 7.7 U: 10.5	GSI 115	BODIE CONS.	1450x550:06/03/1988
CAMC210971*	LD	04,09	A: 10.8 U: 7.5	GSI 116	BODIE CONS.	1450x550:06/03/1988
CAMC210972*	LD	04,09	A: 10.9 U: 6.7	GSI 117	BODIE CONS.	1450x550:06/03/1988
CAMC210973*	LD	04,09	A: 8.6 U: 9.8	GSI 118	BODIE CONS.	1450x550:06/03/1988

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UNPATENTED MINING CLAIMS IN THE BODIE BOWL

BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC210974*	LD	03,10	A: 4.1 U: 15.0	GSI 119	BODIE CONS.	1450x550:06/03/1988
CAMC210975	LD	03,10	A: 0.0 U: 17.4	GSI 120	BODIE CONS.	1450x550:06/03/1988
CAMC210976	LD	03,10	A: 0.0 U: 18.0	GSI 121	BODIE CONS.	1450x550:06/03/1988
CAMC210977	LD	03,10	A: 0.0 U: 19.4	GSI 122	BODIE CONS.	1450x550:06/03/1988
CAMC210978	LD	03,10	A: 0.0 U: 19.0	GSI 123	BODIE CONS.	1450x550:06/03/1988
CAMC210979	LD	03,10	A: 0.0 U: 17.5	GSI 124	BODIE CONS.	1450x550:06/04/1988
CAMC210980	LD	03,10	A: 0.0 U: 9.6	GSI 125	BODIE CONS.	1450x300:06/04/1988
CAMC210981	LD	02,03 10,11	A: 0.0 U: 18.1	GSI 126	BODIE CONS.	1450x550:06/04/1988
CAMC210982	LD	02,11	A: 0.0 U: 18.0	GSI 127	BODIE CONS.	1450x550:06/04/1988
CAMC210983	LD	02,11	A: 0.0 U: 18.1	GSI 128	BODIE CONS.	1450x550:06/04/1988
CAMC210986	LD	11	A: 0.0 U: 17.2	GSI 131	BODIE CONS.	1450x550:06/06/1988
CAMC210987	LD	11	A: 0.0 U: 17.2	GSI 132	BODIE CONS.	1450x550:06/06/1988
CAMC210988	LD	11	A: 0.0 U: 17.2	GSI 133	BODIE CONS.	1450x550:06/06/1988
CAMC210991	LD	11	A: 0.0 U: 11.4	GSI 136	BODIE CONS.	950x550:06/06/1988
CAMC210992	LD	11	A: 0.0 U: 11.3	GSI 137	BODIE CONS.	950x550:06/06/1988
CAMC210993	LD	11	A: 0.0 U: 11.3	GSI 138	BODIE CONS.	950x550:06/06/1988
CAMC211153	LD	22	A: 0.0 U: 9.4	GSI 297	BODIE CONS.	300x550: 06/16/1988
CAMC211154	LD	22	A: 0.0 U: 18.1	GSI 298	BODIE CONS.	1450x550:06/16/1988

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UNPATENTED MINING CLAIMS IN THE BODIE BOWL

BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC211155	LD	22	A: 0.0 U: 18.4	GSI 299	BODIE CONS.	1450x550:06/16/1988
CAMC211156	LD	22	A: 0.0 U: 18.8	GSI 300	BODIE CONS.	1450x550:06/16/1988
CAMC211157	LD	22	A: 0.0 U: 17.1	GSI 300A	BODIE CONS.	1450x550:06/16/1988
CAMC211175	LD	23	A: 0.0 U: 18.3	GSI 318	BODIE CONS.	1450x550:06/09/1988
CAMC211176	LD	23	A: 0.0 U: 17.2	GSI 319	BODIE CONS.	1450x550:06/09/1988
CAMC211177	LD	22,23	A: 0.0 U: 17.5	GSI 320	BODIE CONS.	1450x550:06/09/1988
CAMC211178	LD	22	A: 0.0 U: 16.8	GSI 321	BODIE CONS.	1450x550:06/09/1988
CAMC211179	LD	22	A: 0.0 U: 16.7	GSI 322	BODIE CONS.	1450x550:06/09/1988
CAMC211180	LD	22	A: 0.0 U: 17.2	GSI 323	BODIE CONS.	1450x550:06/09/1988
CAMC211181	LD	22	A: 0.0 U: 17.6	GSI 324	BODIE CONS.	1450x550:06/09/1988
CAMC211182	LD	22	A: 0.0 U: 18.0	GSI 325	BODIE CONS.	1450x550:06/09/1988
CAMC211183	LD	22	A: 0.0 U: 18.5	GSI 326	BODIE CONS.	1450x550:06/09/1988
CAMC211184	LD	22	A: 0.0 U: 16.6	GSI 327	BODIE CONS.	1450x550:6/10/1988
CAMC211185	LD	22	A: 0.0 U: 17.4	GSI 328	BODIE CONS.	1450x550:06/10/1988
CAMC211186	LD	21,22	A: 0.0 U: 18.2	GSI 329	BODIE CONS.	1450x550:06/10/1988
CAMC211187	LD	21	A: 0.0 U: 17.8	GSI 330	BODIE CONS.	1450x550:06/10/1988
CAMC211188	LD	21	A: 0.0 U: 17.7	GSI 331	BODIE CONS.	1450x550:06/10/1988
CAMC211189	LD	21	A: 0.0 U: 17.2	GSI 332	BODIE CONS.	1450x550:06/10/1988

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BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC211220	LD	21	A: 0.0 U: 18.5	GSI 363	BODIE CONS.	1450x550:06/10/1988
CAMC211221	LD	21	A: 0.0 U: 17.7	GSI 364	BODIE CONS.	1450x550:06/10/1988
CAMC211254	LD	21	A: 0.0 U: 17.8	GSI 397	BODIE CONS.	1450x550:06/10/1988
CAMC211267*	LD	10,15	A: 0.0 U: 15.2	6SI 405	BODIE CONS.	1320x550:06/08/1988
CAMC211269*	LD	10,15	A: 7.5 U: 8.1	GSI 406	BODIE CONS.	1320x550:06/08/1988
CAMC211271*	LD	10,15	A: 10.8 U: 5.6	GSI 407	BODIE CONS.	1320x550:06/08/1988
CAMC211273	LD	10,15	A: 0.0 U: 17.9	GSI 408	BODIE CONS.	1450x550:06/08/1988
CAMC211275	LD	10,15	A: 0.0 U: 16.7	GSI 409	BODIE CONS.	1450x550:06/08/1988
CAMC211277	LD	10,15	A: 0.0 U: 17.3	GSI 410	BODIE CONS.	1450x550:6/08/1988
CAMC211279	LD	14	A: 0.0 U: 16.9	GSI 411	BODIE CONS.	1450x550:06/08/1988
CAMC211281	LD	14	A: 0.0 U: 18.2	GSI 412	BODIE CONS.	1450x550:06/08/1988
CAMC211283	LD	14	A: 0.0 U: 6.6	GSI 413	BODIE CONS.	1450x200:06/08/1988
CAMC211292	LD	22	A: 0.0 U: 11.2	GSI 417A	BODIE CONS.	1400x350:06/16/1988
CAMC211294	LD	22	A: 0.0 U: 8.5	GSI 418A	BODIE CONS.	1100x350:06/16/1988
CAMC211444	LD	08	A: 0.0 U: 17.7	GSI 582	BODIE CONS.	1450x550:06/11/1988
CAMC211445	LD	08	A: 0.0 U: 16.6	GSI 583	BODIE CONS.	1450x550:06/11/1988
CAMC211446	LD	08	A: 0.0 U: 17.9	GSI 584	BODIE CONS.	1450x550:06/11/1988
CAMC211447	LD	08	A: 0.0 U: 17.9	GSI 585	BODIE CONS.	1450x550:06/11/1988

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BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC211448	LD	08	A: 0.0 U: 17.4	GSI 586	BODIE CONS.	1450x550:06/11/1988
CAMC211449	LD	08	A: 0.0 U: 17.4	GSI 587	BODIE CONS.	1450x550:06/11/1988
CAMC211450	LD	08	A: 0.0 U: 17.5	GSI 588	BODIE CONS.	1450x550:06/11/1988
CAMC211451	LD	08	A: 0.0 U: 17.9	GSI 589	BODIE CONS.	1450x550:06/11/1988
CAMC211452	LD	08	A: 0.0 U: 17.1	GSI 590	BODIE CONS.	1450x550:06/11/1988
CAMC211453	LD	08,09	A: 0.0 U: 17.5	GSI 591	BODIE CONS.	1450x550:06/11/1988
CAMC211454	LD	09	A: 0.0 U: 8.0	GSI 592	BODIE CONS.	900x400:06/11/1988
CAMC211465	LD	08	A: 0.0 U: 18.1	GSI 603	BODIE CONS.	1450x550:06/11/1988
CAMC211466	LD	08	A: 0.0 U: 17.0	GSI 604	BODIE CONS.	1450x550:06/11/1988
CAMC211467	LD	08	A: 0.0 U: 18.3	GSI 605	BODIE CONS.	1450x550:06/11/1988
CAMC211468	LD	08	A: 0.0 U: 18.2	GSI 606	BODIE CONS.	1450x550:06/11/1988
CAMC211469	LD	08	A: 0.0 U: 17.7	GSI 607	BODIE CONS.	1450x550:06/11/1988
CAMC211470	LD	08	A: 0.0 U: 17.8	GSI 608	BODIE CONS.	1450x550:06/11/1988
CAMC211471	LD	08	A: 0.0 U: 17.8	GSI 609	BODIE CONS.	1450x550:06/11/1988
CAMC211472	LD	08	A: 0.0 U: 18.1	GSI 610	BODIE CONS.	1450x550:06/11/1988
CAMC211473	LD	08	A: 0.0 U: 17.4	GSI 611	BODIE CONS.	1450x550:06/11/1988
CAMC211474	LD	08,09	A: 0.0 U: 9.8	GSI 612	BODIE CONS.	1450x300:06/11/1988
CAMC211485	LD	08	A: 0.0 U: 17.6	GSI 623	BODIE CONS.	1450x550:06/11/1988

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BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC211486	LD	08	A: 0.0 U: 16.6	GSI 624	BODIE CONS.	1450x550:06/11/1988
CAMC211487	LD	08	A: 0.0 U: 17.9	GSI 625	BODIE CONS.	1450x550:06/11/1988
CAMC211488	LD	08	A: 0.0 U: 17.8	GSI 626	BODIE CONS.	1450x550:06/11/1988
CAMC211489	LD	08	A: 0.0 U: 17.4	GSI 627	BODIE CONS.	1450x550:06/11/1988
CAMC211490	LD	08	A: 0.0 U: 17.6	GSI 628	BODIE CONS.	1450x550:06/11/1988
CAMC211491	LD	08	A: 0.0 U: 4.8	GSI 630	BODIE CONS.	400x550:06/11/1988
CAMC211492	LD	08	A: 0.0 U: 4.9	GSI 631	BODIE CONS.	400x550:06/11/1988
CAMC211493	LD	08	A: 0.0 U: 4.8	GSI 632	BODIE CONS.	400x550: 06/11/1988
CAMC211495	LD	08,09	A: 0.0 U: 2.9	GSI 633A	BODIE CONS.	400x300: 06/11/1988
CAMC211505	LD	08,17	A: 0.0 U: 17.6	GSI 643	BODIE CONS.	450x550:06/11/1988
CAMC211506	LD	08,17	A: 0.0 U: 16.5	GSI 644	BODIE CONS.	1450x550:06/12/1988
CAMC211507	LD	08,17	A: 0.0 U: 17.8	GSI 645	BODIE CONS.	450x550:06/12/1988
CAMC211508	LD	08,17	A: 0.0 U. 17.5	GSI 646	BODIE CONS.	1450x550:06/12/1988
CAMC211509	LD	08,17	A: 0.0 U: 17.2	GSI 647	BODIE CONS.	1450x550:06/12/1988
CAMC211510	LD	08,17	A: 0.0 U: 17.4	GSI 648	BODIE CONS.	1450x550:06/12/1988
CAMC211521	LD	17	A: 0.0 U: 17.6	GSI 660	BODIE CONS.	1450x550:06/12/1988
CAMC211522	LD	17	A: 0.0 U: 16.6	GSI 661	BODIE CONS.	1450x550:06/12/1988
CAMC211523	LD	17	A: 0.0 U: 17.9	GSI 661A	BODIE CONS.	1450x550:06/12/1988

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BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC211524	LD	17	A: 0.0 U: 17.5	GSI 662	BODIE CONS.	1450x550:06/12/1988
CAMC211525	LD	17	A: 0.0 U: 17.2	GSI 663	BODIE CONS.	1450x550:06/12/1988
CAMC211526	LD	17	A: 0.0 U: 8.6	GSI 664	BODIE CONS.	1450x275:06/12/1988
CAMC211536	LD	17,18	A: 0.0 U: 18.4	GSI 674	BODIE CONS.	1450x550:06/12/1988
CAMC211537	LD	17	A: 0.0 U: 18.4	GSI 675	BODIE CONS.	1450x550:06/12/1988
CAMC211538	LD	17	A: 0.0 U: 17.3	GSI 676	BODIE CONS.	1450x550:06/12/1988
CAMC211539	LD	17	A: 0.0 U: 18.6	GSI 677	BODIE CONS.	1450x550:06/12/1988
CAMC211540	LD	17	A: 0.0 U: 18.1	GSI 678	BODIE CONS.	1450x550:06/12/1988
CAMC211541	LD	17	A: 0.0 U: 17.8	GSI 679	BODIE CONS.	1450x550:06/12/1988
CAMC211542	LD	17	A: 0.0 U: 2.8	GSI 680	BODIE CONS.	450x300:06/12/1988
CAMC211552	LD	17,18 19,20	A: 0.0 U: 7.6	GSI 690	BODIE CONS.	1450x550:06/12/1988
CAMC211553	LD	17	A: 0.0 U: 17.7	GSI 691	BODIE CONS.	450x550:06/12/1988
CAMC211554	LD	17	A: 0.0 U: 16.8	GSI 692	BODIE CONS.	1450x550:06/12/1988
CAMC211555	LD	17	A: 0.0 U: 18.1	GSI 693	BODIE CONS.	1450x550:06/12/1988
CAMC211556	LD	17	A: 0.0 U: 17.4	GSI 694	BODIE CONS.	1450x550:06/12/1988
CAMC211557	LD	17	A: 0.0 U: 9.6	GSI 695	BODIE CONS.	800x550:06/12/1988
CAMC211568	LD	20	A: 0.0 U: 17.8	GSI 706	BODIE CONS.	1450x550:06/12/1988
CAMC211569	LD	20	A: 0.0 U: 16.7	GSI 707	BODIE CONS.	450x550:06/12/1988

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BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC211570	LD	20	A: 0.0 U: 18.0	GSI 708	BODIE CONS.	1450x550:06/12/1988
CAMC211571	LD	20	A: 0.0 U: 17.3	GSI 709	BODIE CONS.	1450x550:06/12/1988
CAMC211583	LD	20	A: 0.0 U: 16.5	GSI 721	BODIE CONS.	1450x550:06/12/1988
CAMC211584	LD	20	A: 0.0 U: 17.7	GSI 722	BODIE CONS.	1450x550:06/12/1988
CAMC211585	LD	20	A: 0.0 U: 17.7	GSI 723	BODIE CONS.	1450x550:06/12/1988
CAMC211997	LD	20	A: 0.0 U: 13.9	GSI 1471	BODIE CONS.	1100x550:08/09/1988
CAMC211998	LD	20	A: 0.0 U: 13.4	GSI 1472	BODIE CONS.	1100x550:08/09/1988
CAMC212003	LD	11	A: 0.0 U: 17.5	GSI 1477	BODIE CONS.	1450X300:08/09/1988
CAMC212005	LD	14	A: 0.0 U: 3.5	GSI 1479	BODIE CONS.	800x200:08/09/1988
CAMC238509*	PL	16	A: 19.8 U: 0.0	BCP 1	BODIE CONS.	ALQ PTS:09/11/1990
CAMC238510*	PL	16	A: 20.8 U: 0.0	BCP 2	BODIE CONS.	ALQ PTS:09/11/1990
CAMC238511*	PL	16	A: 20.9 U: 0.0	BCP 3	BODIE CONS.	ALQ PTS:09/11/1990
CAMC238512*	PL	15	A: 21.4 U: 0.0	BCP 4	BODIE CONS.	ALQ PTS:08/15/1990
CAMC238513*	PL	15	A: 19.6 U: 0.0	BCP 5	BODIE CONS.	ALQ PTS:08/15/1990
CAMC238514*	PL	15	A: 20.8 U: 0.0	BCP 6	BODIE CONS.	ALQ PTS:08/09/1990
CAMC238515*	PL	15	A: 7.6 U: 14.2	BCP 7	BODIE CONS.	ALQ PTS:08/09/1990
CAMC238516*	PL	15	A: 8.6 U: 12.0	BCP 8	BODIE CONS.	ALQ PTS:08/09/1990
CAMC238517*	PL	15	A: 9.6 U: 12.7	BCP 9	BODIE CONS.	ALQ PTS:08/15/1990

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BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC238518*	PL	16	A: 8.6 U: 12.1	BCP 10	BODIE CONS.	ALQ PTS:09/11/1990
CAMC238519*	PL	16	A: 14.8 U: 6.0	BCP 11	BODIE CONS.	ALQ PTS:09/11/1990
CAMC238520*	PL	16	A: 20.3 U: 0.0	BCP 12	BODIE CONS.	ALQ PTS:09/10/1990
CAMC238521*	PL	16	A: 20.1 U: 0.0	BCP 13	BODIE CONS.	ALQ PTS:09/11/1990
CAMC238522*	PL	16	A: 16.1 U: 3.8	BCP 14	BODIE CONS.	ALQ PTS:08/07/1990
CAMC238523*	PL	16	A: 6.2 U: 14.5	BCP 15	BODIE CONS.	ALQ PTS:08/07/1990
CAMC238524	PL	16	A: 0.0 U: 20.1	BCP 16	BODIE CONS.	ALQ PTS:08/07/1990
CAMC238525	PL	16	A: 0.0 U: 19.7	BCP 17	BODIE CONS.	ALQ PTS:08/07/1990
CAMC238526	PL	15	A: 0.0 U: 20.1	BCP 18	BODIE CONS.	ALQ PTS:08/09/1990
CAMC238527	PL	15	A: 0.0 U: 21.0	BCP 19	BODIE CONS.	ALQ PTS:08/09/1990
CAMC238528*	PL	16	A: 0.1 U: 19.9	BCP 20	BODIE CONS.	ALQ PTS:08/07/1990
CAMC238529*	PL	16	A: 10.0 U: 9.9	BCP 21	BODIE CONS.	ALQ PTS:08/08/1990
CAMC238530*	PL	21	A: 0.5 U: 18.7	BCP 22	BODIE CONS.	ALQ PTS:08/08/1990
CAMC238531*	PL	21	A: 17.7 U: 0.2	BCP 23	BODIE CONS.	ALQ PTS:08/27/1990
CAMC240739*	LD	16	A: 7.8 U: 0.0	COUPON GAP	BODIE CONS.	800x500:10/03/1990
CAMC240740*	LD	16	A: 2.4 U: 0.0	AJAX SOUTH	BODIE CONS.	700x200:10/03/1990
CAMC240741*	LD	16	A: 11.9 U: 0.0	BLM	BODIE CONS.	1500x400:10/03/1990
CAMC240742*	LD	16	A: 2.8 U: 0.0	ARTHUR 1	BODIE CONS.	400x400:11/01/1990

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BLM CLAIM NUMBER	TYPE	SEC	ALTERED UNALTERED	CLAIM NAME	CLAIMANT	CLAIM SIZE: DATE OF LOCATION
CAMC240743*	LD	09,16	A: 4.6 U: 0.0	ARTHUR 2	BODIE CONS.	400x400:11/01/1990
CAMC240744*	LD	09	A: 8.4 U: 0.0	AMARILLO	BODIE CONS.	600x600:11/01/1990
CAMC223339	PL	01	A: 0.0 U: 79.1	GHOST'S GOLD #1	WASHINGTON GOLD MNG	ALQPTS:04/07/1989

APPENDIX 2: BODIE PROTECTION ACT OF 1994

Public Law 103-433; 108 Stat 4509
October 31, 1994

TITLE X -- PROTECTION OF BODIE BOWL.

SEC. 1001. SHORT TITLE.

This title may be cited as the "The Bodie Protection Act of 1994".

SEC. 1002. FINDINGS.

The Congress finds that--

(1) the historic Bodie gold mining district in the State of California is the site of the largest and best preserved authentic ghost town in the western United States;

(2) the Bodie Bowl area contains important natural, historical and aesthetic resources;

(3) Bodie was designated as a National Historical Landmark in 1961 and a California State Historic Park in 1962, is listed on the National Register of Historic Places, and is included in the Federal Historic American buildings Survey;

(4) nearly 200,000 persons visit Bodie each year, providing the local economy with important annual tourism revenues;

(5) the town of Bodie is threatened by proposals to explore and extract minerals: mining in the Bodie Bowl area may have adverse physical and aesthetic impacts on Bodie's historical integrity, cultural values, and ghost town character as well as on its recreational values and the area's flora and fauna;

(6) the California State Legislature, on September 4, 1990, requested the President and the Congress to direct the Secretary of the Interior to protect the ghost town character, ambience, historic buildings, and scenic attributes of the town of Bodie and nearby areas;

(7) the California State Legislature also requested the Secretary, if necessary to protect the Bodie Bowl area, to withdraw the Federal lands within the area from all forms of mineral entry and patent;

(8) the National Park Service listed Bodie as a priority one endangered National Historic Landmark in its fiscal year 1990 and 1991 report to Congress entitled "Threatened and Damaged National Historic Landmarks" and recommended protection of the Bodie area; and

(9) it is necessary and appropriate to provide that all Federal lands within the Bodie Bowl area are not subject to location, entry, and patent under the mining laws of the United States, subject to valid existing rights, and to direct the Secretary to consult with the Governor of the State of California before approving any mining activity plan within the Bodie Bowl.

SEC. 1003. DEFINITIONS.

For the purposes of this title:

(1) The term "Bodie Bowl" means the Federal lands and interests therein within the area generally depicted on the map referred to in section 1004(a).

(2) The term "mineral activities" means any activity involving mineral prospecting, exploration, extraction, milling, beneficiation, processing, and reclamation.

(3) The term "Secretary" means the Secretary of the Interior.

Sec. 1004. APPLICABILITY OF MINERAL MINING, LEASING AND DISPOSAL LAWS

(a) RESTRICTION.--Subject to valid existing rights, after the date of enactment of this title Federal and interests in lands within the area generally depicted on the map entitled "Bodie Bowl" and dated June 12, 1992, shall not be--

(1) open to the location of mining and mill site claims under the general mining laws of the United States;

(2) subject to any lease under the Mineral Leasing Act (30 U.S.C. 181 and following) or the Geothermal Steam Act of 1970 (30 U.S.C. 100 and following), for lands within the Bodie Bowl; and

(3) available for disposal of mineral materials under the Act of July 31, 1947, commonly known as the Materials Act of 1947 (30 U.S.C. 100 and following).

Such map shall be on file and available for public inspection in the Office of the Secretary, and appropriate offices of the Bureau of Land Management and the National Park Service. As soon as practicable after the date of enactment of this title, the Secretary shall publish a legal description of the Bodie Bowl area in the Federal Register.

(b) VALID EXISTING RIGHTS.--As used in this section, the term "valid existing rights" in reference to the general mining laws means that a mining claim located on lands within the Bodie Bowl was properly located and maintained under the general mining laws prior to the date of enactment of this title, was supported by a discovery of a valuable mineral deposit within the meaning of the general mining laws on the date of enactment of this title, and that such claim continues to be valid.

(c) VALIDITY REVIEW.--The Secretary shall undertake an expedited program to determine the validity of all unpatented mining claims located within the Bodie Bowl. The expedited program shall include an examination of all unpatented mining claims, including those for which a patent application has not been filed. If a claim is determined to be invalid, the Secretary shall promptly declare the claim to be null and void, except that the Secretary shall not challenge the validity of any claim located within the Bodie Bowl for the failure to do assessment work for any period after the date of enactment of this title. The Secretary shall make a determination with respect to the validity of each claim referred to under this subsection within two years after the date of enactment of this title.

(d) LIMITATION ON PATENT ISSUANCE.

(1) MINING CLAIMS.--(A) After January 11, 1993, no patent shall be issued by the United States for any mining claim located under the general mining laws within the Bodie Bowl unless the Secretary determines that, for the claim concerned--

(i) a patent application was filed with the Secretary on or before such date; and

(ii) all requirements established under sections 2325 and 2326 of the Revised Statutes (30 U.S.C. 29 and 30) for vein or lode claims and sections 2329, 2330, 2331, and 2333 of the Revised Statutes (30 U.S.C. 35, 36, 37) for placer claims were fully complied with by that date.

(B) If the Secretary makes the determinations referred to in subparagraph (A) for any mining claim, the holder of the claim shall be entitled to the issuance of a patent in the same manner and degree to which such claim holder would have been entitled to prior to the enactment of this title, unless and until such determinations are withdrawn or invalidated by the Secretary or by a court of the United States.

(2) MILL SITE Claims.--(A) After January II, 1993, no patent shall be issued by the United States for any mill site claim located under the general mining laws within the Bodie Bowl unless the Secretary determines that, for the claim concerned--

(i) a patent application was filed with the Secretary on or before January 11 , 1993; and

(ii) all requirements applicable to such patent application were fully complied with by that date.

(B) If the Secretary makes the determinations referred to in subparagraph (A) for any mill site claim, the holder of the claim shall be entitled to the issuance of a patent in the same manner and degree to which such claim holder would have boon entitled to prior to the enactment of this title, unless and until such determinations are withdrawn or invalidated by the Secretary or by a court of the United States.

SEC. 1005. MINERAL ACTIVITIES.

(a) IN GENERAL.--Notwithstanding the last sentence of section 302(b) of the Federal Land Policy and Management Act of 1976, and in accordance with this title and other applicable law, the Secretary shall require that mineral activities be conducted in the Bodie Bowl so as to--

(1) avoid adverse effects on the historic, cultural, recreational, and natural resource values of the Bodie Bowl; and

(2) minimize other adverse impacts to the environment.

(b) RESTORATION OF EFFECTS OF MINING EXPLORATION. --As soon possible after the date of enactment of this Act, visible evidence or other effects of mining exploration activity within the Bodie Bowl conducted on or after September 1, 1988, shall be reclaimed by the operator in accordance with regulations prescribed pursuant to subsection (d).

(c) ANNUAL EXPENDITURES; FILING.-- The requirements for annual expenditures on unpatented mining claims imposed by Revised Statute 2324 (30 U.S.C. 28) shall not apply to any such claim located with the Bodie Bowl. In lieu of filing the affidavit of assessment work referred to under section 314(a)(1) of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1744(a)(1)), the holder of any unpatented mining or mill site claim located within the Bodie Bowl shall only be required to file the notice of intention to hold the mining claim referred to in such section 314(a)(1).

(d) REGULATIONS.--The Secretary shall promulgate rules to implement this section, in consultation with the Governor of the State of California, within 180 days after the date of enactment of this title. Such

rules shall be no less stringent than the rules promulgated pursuant to the Act of September 28, 1976 entitled "An Act to provide for the regulation of mining activity within, and to repeal the application of mining laws, to, areas of the National Park System, and for other purposes" (Public Law 94-429; 16 U.S.C. 1901-1912).

SEC. 1006. STUDY.

Beginning as soon as possible after the date of enactment of this title, the Secretary shall review possible actions to preserve the scenic character, historical integrity, cultural and recreational values, flora and fauna, and ghost town characteristics of lands and structures within the Bodie Bowl. No later than 3 years after the date of such enactment, the Secretary shall submit to the Committee on Energy and Natural Resources of the United States Senate and the Committee on Natural Resources of the United States House of Representatives a report that discusses the results of such review and makes recommendations as to which steps (including but not limited to acquisition of lands or valid mining claims) should be undertaken in order to achieve these objectives.

SEC. 1007. AUTHORIZATION OF APPROPRIATIONS.
There is authorized to be appropriated such sums as may be necessary to carry out this title.

APPENDIX 3: BODIE BOWL MINING CLAIM VALIDITY EXAMINATION TEAMS

CORE TEAM

Gregg Wilkerson GW, BLM, Caliente Resource Area, certified mineral examiner #0085
Larry M.Vredenburgh LV, BLM, Caliente Resource Area, certified mineral examiner #0064
Rob Waiwood, California Desert District, certified review mineral examiner #0010
Tom Sweeney, Bureau of Mines (Spokane), geologist
Mike Lane, Bureau of Mines (Denver), geologist
Cheryl Seath, Bishop Resource Area, geologist

ASSOCIATE TEAM MEMBERS

Jim Haerter, BLM, Caliente Resource Area, geologist
Anne Falcon, BLM , Caliente Resource Area, geologist
Karen Margrave, BLM , Caliente Resource Area, cartographer
Dave Taylor, BLM, Lake Havasu Resource Area, geologist

REGULATIONS AND SURFACE MANAGEMENT TEAM

Doug Dodge, BLM, Bishop Resource Area, Assistant Area Manager
Roger Haskins, BLM, Washington Office, mining law specialist and reviewer
Noah Tilghman, Calif. Div. Parks and Recreation
David Shaver, National Parks Service
Scott Burns, Mono County Planning Department
Jim Hamilton, BLM , California State Office, mineral specialist

SUPPORT AND COORDINATION STAFF

Henry Wolter, BLM , California State Office, geographic information specialist
Ignacio Lopez, BLM , California State Office, cadastral survey
David Peebles, BLM , California State Office, contracting officer
Janet Bedrosian, BLM , California State Office, public affairs officer
Steve Nelson, BLM, Bishop Resource Area, GIS specialist
Max Viger, BLM, Caliente Resource Area, GIS specialist
Carlos Lara, BLM, Caliente Resource Area, student co-op.
Jason Powell, BLM, Eastern States Office, student co-op

APPENDIX 4: CASE HISTORY: PRE-BODIE PROTECTION ACT

GW= Gregg GW, LV = Larry LV
Chronology of Events

early summer 1988	Conversation between BLM and Galactic regarding environmental issues in the Bodie Area. These were prior to Galactic's acquisition on Homestake's claims.
Jul 1, 1988	Meeting in Bishop Resource Area (BRA) office between Jack Clark, Bill Williams, (Galactic), Don Deem (Shiningtree), Mark Ziegenbein (BLM Geologist), and Mike Ferguson (BLM Acting Area Manager). Discussed BLM requirements, Galactic's future plans and environmental issues.
Aug 1, 1988	Mining Notice submitted to BRA. Eighteen exploration drill holes mostly on existing roads and disturbance (<2 acres of proposed disturbance).
Aug 25, 1988	Field visit at Bodie between Don Deem, Jack Clark, Bill Williams, Mark Whitehead (Galactic Geologist), Mono County representatives, Mark Ziegenbein and Brent Lamkin (BLM) to review mining notice and develop mitigation. Mike Skenfield and Terry Russi met to review wildlife concerns.
Sep 16, 1988	Field meeting between Mark Ziegenbein, Eric Levy (BLM Archeologist) and Mark Whitehead to culturally clear drill locations and inspect drilling operations.
Nov 14, 1988	Amendment to mining notice submitted to BRA. 2 water wells proposed (<1 acre disturbance).
Apr 25, 1989	Bishop office meeting between Mark Ziegenbein, Mike Ferguson and Noah Tillman (California State Parks). BLM NEPA requirements, mining laws and regulations were discussed. The process of environmental documentation, decision making and State Parks role in this process were also outlined.
May 4, 1989	Meeting at California State Parks office,Sacramento.The national landmark boundary, state parks concerns regarding mining near the park, and BLM 3809 regulations were reviewed.
May 15, 1989	Galactic presentation to Mono County Supervisors and members of the public.
Jun 12, 1989	Amendment to mining notice submitted to Bishop R.A.. Four exploratory drill holes on previous disturbance are proposed, with some blade work required.(less than one acre disturbance).
Jun 15, 1989	Field visit to site by BLM.
Jun 23, 1989	Galactic notified BLM that they have suspended drilling operations.
Jun 28, 1989	Meeting and informational tour of Bodie for the Directors of BLM and State parks.
Apr 5, 1990	Notice of Intent filed with Bishop R.A. for four exploratory drill holes from 6/12/89 amendment to the mining notice would start in late April. Eight (8) exploratory drill holes are proposed.
Apr 18, 1990	Field inspection of reclamation for previous exploratory activities.
Apr 26, 1990	BLM cultural clearance of 12 exploratory holes identified in April 5, notice.
Jun 1990	Mono County applies provisions of SMARA to private disturbance by BCMC totals more than one acre. Public hearing required before permitting any further activities.
Jul 18, 1990	NOI for 20 trenches from BCMC: NOI for 1988 anticipated 50 drill holes 23 were actually drilled, all disturbance prior to 1990 reclaimed. NOI for 1990 will not drill balance of 12 remaining sites. continued assessment work will be limited to trenching and hydrologic investigations. 20 trenches to be dug in existing road way.
Aug 1990	Mono County Directors review of Data Collection and Exploration activity.
Aug 13, 1990	WCRM at site doing cultural clearance during NOI work.

Sep 1990	Notice of preparation by Mono County for BCMC exploration project-publicmeeting set for Oct 22. 1990.
Sep 12, 1990	Meeting between Mono County, BCMC, BLM: results, BCMC to file conditional use permit application and SMART plan. If these are approved then will file NOI with BLM.
Aug 1991	Bishop Resource Area Management plan finalized submitted for Record of Decision signature. Bodie specific plans: designate 5,935 acres within Bodie bowl as an ACEC to preserve the existing historic integrity of the Bodie National Historic Landmark and protect scenic values. Work with the public to establish Limits of acceptable change through the ACEC management plan. Propose 1,500 acres near Bodie State Park for withdrawal from locatable mineral entry, require a plan of operations for all mineral exploration activities within the ACEC.
Mar 2, 1992	Protect Bodie Bill, HR 4370 introduced by Rep. Richard Lehman and Rep. George Miller. Bill would withdraw, subject to VER, 6,000 acres from mining, mineral leasing and mineral material disposal.
Oct 2, 1992	Quit claim deed received: William Boynton gives all rights to Wildrose #1, #2, #5, #7, #7W and #10 claims to Greg Firman.
Jul 1, 1992	NOI submitted by BCMC to conduct assessment work on 18 claims. Drill 54 core holes with track mounted rig, .14 acre disturbance, exempt from SMARA. ARS cultural consultant on site during drilling to guide where rig can travel, special design on rig to lessen noise impact to Ghost town. Mono County and BLM at site during drilling. Reclamation to be complete by October 1992.
Jan ?, 1993	ACEC plan begun with public participation.
Mar 25, 1993	Final Record of Decision signed by Ed Hastey for the Bishop Resource Area Management Plan.
Jun 4, 1993	CACA 31729 two year temporary withdrawal of Bodie Bowl.

APPENDIX 5: CASE HISTORY: POST-BODIE PROTECTION ACT

GW = Gregg GW, LV = Larry LV, RR = Robert Rusko

Dec. 8, 1994	Letter from GW to Galactic asking for meeting about Bodie Bowl validity examinations.
Dec. 16, 1994	Memo from State Director giving lead for Bodie Project to Bakersfield District Office.
Dec. 20, 1994	GW meets with RR (Galactic trustee) and John Hartung (his lawyer) in San Francisco.
Jan. 13, 1995	Memo to Heidi Porter asking for mining claim files.
Jan. 14, 1995	Draft Action Plan. Identifies expanded Bodie team.
Jan. 26, 1995	Draft Bodie Mining Regulations completed.
Jan. 30, 1995	Memo to CSO identifying core team for validity exam.
Feb. 3, 1995	First notification letter to RR, copies sent to all claimants.
Feb. 9, 1995	GW has meeting with CSO Cadastral Staff and asks for their help with project. Cadastral is not able to help at this time.
Feb. 14, 1995	Aerial photographs ordered.
Feb. 15, 1995	Letter of Feb. 3, 1995 returned. No certified mail delivery to Canada.
Feb. 17, 1995	Letter to RR. Addresses letter returned due to lack of certified mail delivery from U.S. to canada. All future correspondence sent certified letter to Joh Hartung, RR's attorney in San Francisco.
Feb. 23, 1995	Bodie Team Meeting in Bishop. Work assignments made for field work, office work and report writing. Team members agree to work one week in field at Bodie every 3 weeks. We agree to have at least two geologists in field at all times between April 24, and October 15, 1995.
Mar. 7, 1995	Telephone conversation between GW and William Boynton and GW and Bob Miller.
Mar. 13, 1995	Letter to Bob Miller.
Mar. 13, 1995	Letter to Bodie State Park requesting permission to place a trailer at the northern Park campground.
Mar. 21, 1995	Housing for field crews identified in Bridgeport (one bedroom apartment). This would used as a dormitory. Staff will get camp-rate per diem while at Bodie.
Mar. 23, 1995	Rental agreement for Bridgeport apartment for BLM personnel.
Mar. 28, 1995	Discrepancies in BLM's mining claim records identified.
April 3, 1995	Second meeting with RR and Hartung in San Francisco. RR indicates he will share drilling data with BLM pending consultation with former Galactic employees Mark Whitehead and Gordon Gumble.
April 4, 1995	Meeting with Bob Miller in Fremont. Shows LV/GW diskettes of assay data and allows us to copy a topographic map at 1 inch:500 ft of the Bodie Project.
April 12, 1995	Scott Bums of Mono County Planning department offers use of Mono County Courthouse office for BLM staff.
April 20, 1995	Steve Nelson completes digitizing of claim Maps and geology.
April 6, 1995	Request from GW for additional funding at Mid-year ($30,500)
April 6, 1995	Contract completed for lease of apartment for BLM personnel in Bridgeport.
April 10, 1995	Request for assistance from Miles L. Silberman of USGS.
April 27, 1995	Additional staff identified for the project: Brent Bestman, MIndy Mason, Ed GInoves, Mike Ford, Jim Mitchell, Jim Evans, George Dabai, Ron Smith and Dave Taylor. Of these only Jim Evans and Dave Taylor assisted with field work on this project.
May 17, 1995	Requests for assistance from other BLM mineral examiners sent out.
May 17, 1995	Request to Miles Silberman to conduct geologic training for core team at Bodie.

May 18, 1995	Coordination meeting in Riverside with Bob Anderson, Gregg GW, Larry LV, Rob Waiwood and Jean Juilland.
June 7, 1995	Environmental Assessment for Validity Examination approved by Bishop Area Manager.
June 8, 1995	Contract for renting Trimble Geo Explorer GPS System completed.
June 12-14,1995	Reconnaissance of project area and geologic training by Silberman.
June 13, 1995	Request to Captain Stoddard for housing at Marine Corps Mountain Warfare Training Center.
June 15, 1995	Second letter requesting for drilling /trenching and assay data and for re-monument of claim corners.
June 16, 1995	GPS rental unit arrives in Bakersfield.
June 20, 1995	Letter to Regional Solicitor asking for assistance in contacting U.S. Trustee to put pressure on RR to release drilling data.
June 26, 1995	Jason Powel joins field crew.
June 26, 1995	Sampling protocols established.
July 18, 1995	Conference call with Mark Whitehead, RR, GW and LV
Aug. 10, 1995	Letter from Jon Hartung describing Galactic's willingness to pay for a placer examination program.
Aug. 16, 1995	Confined Space Entry Plan prepared and reviewed.
Sept. 7, 1995	Meeting in Walnut Creek with GW, LV, RR and Jon Hartung. No data obtained at that meeting.
Sept. 12, 1995	Apartment rental extended to Nov. 1, 1995.
Sept. 18, 1995	GPS rental equipment returned to Lewis and Lewis Enterprises, Ventura, California.
Sept 19, 1995	Third letter from BLM requesting data.
Sept. 29, 1995	Supplemental funding request for Techbase Ore Body Modeling computer program.
Sept. 30, 1995	Request to U.S. Marine Corps for additional housing at the Mountain Warfare Training Center.
Oct. 4, 1995	Fourth letter requesting data (about placer examination). Letter states that BLM needs the data by November 15, 1996 in order to complete the validity reports by October 29, 1996.
Oct. 10-20, 1995	Placer examination with BLM fire crew.
Nov. 14, 1995	Voice Mail message to GW from RR indicating his willingness to supply drilling/assay data.
Nov. 9, 1995	Assays competed on BLM surface samples collected in 1995 field season by Bondar-Clegg of Sparks, Nevada.
Nov. 28, 1995	Letter to RR acknowledging voice-mail message of Nov. 14, 1995. Letter asks for data including Maps in possession Holmes Triad Engineering.
Nov. 29, 1995	Draft legal description of Bodie Bowl prepared.
Dec. 11, 1995	Letter to MSHA requesting assistance with underground sampling safety.
Dec. 15, 1995	Letter to J.S. Cain Company about clarifying ownership of claims which BLM records show as co-owned by Homestake Mining Company.
Dec. 18, 1995	U.S. Trustee dismisses Galactic bankruptcy case.
Jan. 2, 1996	Telephone conversation with GW indicating Rusko's willingness to provide drilling data and Holmes Triad map data.
Jan. 6, 1996	Patricia Cain sends BLM (Bakersfield) copies of lease and option agreements with Homestake to clarify 100% claim ownerships by the Cain Company.
Jan. 7, 1996	Issue Paper for underground sampling (GW).
Jan. 9, 1996	Gary Day of MSHA indicates that his agency can assist with resolving of the underground mapping/sampling safety concerns.

Jan. 12, 1996	Issue Paper for underground sampling (LV, GW).
Jan. 12, 1996	BLM evaluated merits of Techbase Ore Body Modeling software.
Jan. 12, 1996	Conference call identified need for Techbase support.
Jan 15, 1996	GW meets with Nevada Goldfields and obtains comparative cost data (Greg Blaylock)
Jan. 17, 1996	Fifth letter to Bob Miller giving instructions on how to correct deficiencies in BLM's title records for claims owned by Lost Carcass and Buzzard Mining Companies.
Jan. 18, 1996	Attempt to get Mike Lane from Bureau of Mines for 2-year temporary position.
Jan. 22, 1996	Study area expanded by conversion of Bodie Bowl to legal 40-acre subdivisions.
Jan. 24, 1996	BLM (Bakersfield) returns Cain documents provided by them on Jan. 6, 1996.
Jan. 25, 1996	Fifth letter requesting data: Drilling, Holmes Engineering, Amax Report, Cain, Miller.
Jan. 29, 1996	Letter from Regional Solicitor to Leo Weiss, Office of the U.S. Trustee.
Jan. 30, 1996	Memorandum to National Configuration Management Board about Techbase.
Feb. 2, 1996	Sixth letter to RR requesting data.
Feb. 22, 1996	Timeline established for completing Bodie Validity Examinations by April, 1997.
Mar. 7, 18, 20,21,25, 1996	Repeated attempts to contact RR by phone
Mar. 11, 1996	Leo Weiss informs Regional Solicitor the Galactic case was dismissed by the U.S. Bankruptcy court on Dec. 18, 1995.
Mar. 25, 1996	Phone conversation between Bob Miller and GW. Miller has drilling and assay data but cannot provide it to BLM without Galactic's permission.
Mar. 25, 1996	Phone conversation between Patricia Cain and GW. The Cain family has no drilling or assay data from Galactic.
Mar. 29, 1996	Voice Mail message from RR to GW indicating his return to his office April 8, 1996.
April 17, 1996	Voice Mail message from RR to GW asking for a personal meeting. GW returns call and leaves voice-mail message suggesting that the two meet in Walnut Creek on May 14-15, 1996.
April 23, 1996	Voice Mail message from GW to RR stating that a meeting would be welcome on May 13-14, 1996 if BLM would be assured of receiving data at the meeting.
May 7-9, 1996	GW and LV inspect drilling, assay, metalurgical and economic feasibility reports at Cypress-Amax Gold Corp. in Sparks, Nevada. Copies made. Drilling data on TechBase computer format obtained.
May 28, 1996	LV and GW meet with William R. Stanley of Cyprus Metals Co. in Sparks, NV, and obtain digital drill data, reports, Maps, cross-sections.
May 29-30, 96	GW, LV permitted access to Galactic's records in Walnut Creek, California. Copies made.
June 11. 1996	Accessible underground mine workings inspected with Bob Morley, MSHA inspector, GW, LV and Cheryl Seath.
June 13, 1996	GW, LV meet with Greg Blaylock, Nevada Goldfields mining company, Aurora Mine. Acquire comparative cost estimation data.
July 12, 1996	GW meets with Bob Miller and obtains additional digital data and maps.
July 12, 1996	Metallurgical testing completed on BLM samples from the RoseKlip pit.
Aug. 2, 1996	Phase I report reviewed by Rob Waiwood.
Aug. 12-16, 96	Underground sampling by GW, LV and Herrerra.
Sept. 17, 1996	GW meets with Electra Mining Company and obtains comparative cost information (Gary Riggittini).
Dec. 31, 1996	GW meets with Electra Mining Company and obtains comparative cost information (Gary Riggittini)

Dec. 31, 1996	GW meets with Nevada Goldfields and obtains comparative cost information (Greg Blaylock)..
Jan. 24, 1997	Preliminary Report by GW.
Jan. 29, 1997	Telephone call from Bob Miller about acres on private land, BLM land and over the Mineralized Zone.
Feb. 12-13, 97	Telephone call from Bob Miller about GW's maps of extent of the mineralized zone.
Feb. 24, 1997	Garth Tallman, lawyer for Lost Carcass and Buzzard Mining Company (Bob Miller) inquires about calculations of acres and tons of mineralization in the Bodie Bowl.
Mar. 3, 1997	GW recalculates acres and tons in the mineralized zones for constrained and unconstrained pit designs.
Mar, 14, 1997	Mike Norad reviews TechbBase applications with LV.
Mar. 14, 1997	Claimants meet with RR.
Mar. 17, 1997	First review of final report by Rob Waiwood
Oct. 7, 15-17, 1997	Field work on Wild Rose Claim and surrounding areas by Gregg Wilkerson
Nov. 12, 1997	Final review of report by Rob Waiwood.

APPENDIX 6A: OFFICAL CONTACTS WITH ROBERT RUSKO, TRUSTEE FOR GALACTIC MINING COMPANY

GW = Gregg GW, LV = Larry LV, RR = Robert Rusko

Chronology of contacts with Mr. Rusko by BLM:

Dec. 6, 1994	Phone conversation with GW
Dec. 8, 1994	Phone conversation with GW
Dec. 20, 1994	Meeting in San Francisco with GW, LV, RR and Jon Hartung
Dec. 22, 1994	FAX message from GW
Feb. 3, 1995	First letter requesting data, returned due to non-delivery in Canada, resent with another cover letter on Feb. 17, 1995.
Mar. 6, 1995	Phone conversation with GW
Mar. 14, 1995	Phone conversation with GW
May 10, 1995	Voice Mail message from GW
May 11, 1995	Voice Mail message from GW
May 20, 1995	Voice Mail message to GW from RR
May 30, 1995	Voice Mail message from GW
June 15, 1995	Second letter requesting data and for re-monumentation of claim corners
June 30, 1995	Voice Mail message from GW
July 13, 1995	Voice Mail to GW from RR
July 18, 1995	Conference call with Mark Whitehead, RR, GW and LV
Aug 10, 1995	Letter from Jon Hartung describing Galactic's willingness to pay for a placer examination program
Aug. 28, 1995	Voice mail message from RR to LV
Aug. 28, 1995	Voice mail message from GW to RR about meeting in San Francisco Sept. 7-8, 1996.
Sept 7, 1995	Meeting in Walnut Creek with GW, LV, RR and Gordon Gumble
Sept 19, 1995	Third letter from BLM requesting data
Oct 2, 1995	Phone conversation with GW
Oct 4, 1995	Fourth letter requesting data (about placer examination)
Nov 14, 1995	Voice Mail message to GW from RR indicating his willingness to supply drilling/assay data.
Nov 21, 1995	Voice Mail message from GW
Nov 22, 1995	Voice Mail message from GW, recording indicated RR would be out of town until Dec. 5, 1995
Nov. 28, 1995	Fifth letter to RR acknowledging voice-mail message of Nov. 14, 1995. Letter asks for data including Maps in processions of Holmes Triad Engineering.
Jan 2, 1996	Telephone conversation with GW indicating Rusko's willingness to provide drilling data.
Jan 25, 1996	Sixth letter requesting data: Drilling, Holmes Engineering, Amax Report, Cain, Miller.
Feb. 2, 1996	Sixth letter to Rob Rusko requesting data.
Mar 7, 1996	FAX to Rusko via Hartung with topics for discussion on conference call.
Mar 18, 1996	Voice Mail message from GW to Rusko asking about FAX of March 6 and Letter of Jan. 25.
Mar 20, 1996	LV (11:30 a.m.) and GW (4:30 p.m.) spoke with RR's secretary. Asked him to return call.

Mar 20, 1996	Voice Mail from RR to Larry LV 5:20 p.m. Indicated that Mr. Rusko would be checking his voice mail on Thursday/Friday and asked that Larry and GW let his secretary know when they would be in. He would return their calls.
Mar 21, 1996	GW called Rusko and left a message with his secretary that he would be in the office Thursday and Friday. His secretary said he would be back in the office Monday.
Mar 25, 1996	Voice mail from GW to Rusko asking him to call GW.
Mar. 27, 1996	Voice mail from RR to GW indicating he would call back at a later date. GW returned call and left a voice mail message that GW would be in his office March 28, 29 and April 1-4, 1996.
May 7, 1996	Voice mail message from RR to GW asking for a meeting in the Bay Area.
May 14, 1996	Voice mail message from GW to RR suggesting a meeting for May 17 or later date. GW requests that information be provided at that meeting, including drilling records, data from Bob Miller, Patricia Cain and Holmes Triad Engineering and access to Galactic's trailer at Bridgeport and to pulps of assays.
May 21, 1996	T/C from RR to GW, asking for a meeting on May 29-30, 1996. Discussed what BLM wanted to view at the meeting.
May 23, 1996	T/C from RR to GW, confirming meeting of May 29-30, 1996.
May 23, 1996	Letter to Hartung confirming meeting of May 29-30,1996 and the data BLM wanted to view.
May 29-30, 1996	Meeting with Rusko in Walnut Hills. Copies of Galactic's stored files and maps were taken. Rusko requested to contact the other parties to have them release their data.
June 6, 1996	T/C from GW to RR, left message requesting that RR contact the other parties to have them release their data.
June 11, 1996	T/C from GW to RR, left message requesting that RR contact the other parties to have them release their data.
June 25, 1996	T/C from GW to RR, left message requesting that RR contact the other parties to have them release their data.
July 8, 1996	T/C from RR to GW, left message for RR to call.
July 11, 1996	T/C from GW to RR, inviting him to Bodie on July 31, 1996, when Director Dombec is scheduled for a tour.
August 2, 1996	T/C from GW to RR, regarding underground sampling to take place on August 19-24, 1996. Asked again for his assistance to have the other parties release their data.
August 13, 1996	Voice mail from RR to GW, requesting a meeting in Bodie on August 26, 1996.
August 15, 1996	Voice mail from GW to RR, requesting the meeting be held August 19-24, 1996.
August 26, 1996	Voice mail from RR to GW, requesting a meeting on August 27, 1996 in Bridgeport. T/C from RR to GW, connection broken, unable to confirm meeting.
August 27, 1996	T/C from GW to Patricia Cain, requesting that she give RR a message to call GW.
September 16, 1996	Letter from GW to RR, thanking him for furnishing the data on May 29-30, 1996 and asking his assistance to provide the other data.
September 23, 1996	Letter from GW to RR, inventory of data obtained from the May 29-30, 1996 meeting.
November 12, 1996	Voice mail from GW to Hartung.
November 13, 1996	Voice mail from Hartung to GW.
November 14, 1996	Voice mail from GW to Hartung. T/C from Hartung to GW, wanting GW to attend meeting in San Francisco to discuss the claims.

November 26, 1996	T/C from RR to GW, regarding the December 3, 1996 meeting.
	T/C from RR to GW, wanting GW to attend meeting in San Francisco to discuss the claims.
November 27, 1996	T/C from GW to RR, stating unknown if GW would attend the meeting.
December 1, 1996	T/C from RR to GW, regarding the December 3, 1996 meeting.
December 2, 1996	T/C from GW to Hartung, stating that GW would send maps, but not attend the meeting.
December 3, 1996	T/C from RR and Hartung to GW, discussed mineralized zone map.
	Map of mineralized zone sent to John Hartung, bankruptcy attorney.
December 4, 1996	Voice mail from Hartung to GW.
	T/C from GW to Hartung, discussed Wild Rose claims.
December 9, 1996	T/C from Hartung to GW, requesting information on the Lost Carcass claims
October. 27, 1997	Voice Mail message from GW to RR asking for release of Holmes Engineering digital claim and ore body modeling data..

APPENDIX 6B: OFFICIAL CONTACTS WITH LOST CARCASS AND BUZZARD MINING COMPANY

GW=Gregg Wilkerson, LV=Larry Vredenburgh, BM=Bob Miller, RR=Robert Rusko
Chronology of contacts with Bob Miller by BLM.

March 7, 1995	Voice mail from William Boynton to GW.
	T/C from GW to William Boynton, he had Bodie data to provide, to meet March 24, 1995.
	T/C from GW to BM, clarified ownership of his claims.
	Faxed to BM, copy of February 17, 1995 letter to RR.
March 13, 1995	Copy of RR's letter of February 17, 1995 sent to Greg FiRman returned to sender.
March 14, 95	Letter received from Greg FiRman (Wild Rose claims) giving his correct address.
	Letter sent to Greg Firman regarding the Bodie Bowl.
March 18, 95	T/C from William Boynton to GW, meeting rescheduled for March 21, 1995.
March 21, 95	Meeting with GW and William Boynton, he had no information on the Lost Carcass and Buzzard Mining claims, stated he had given that information to Firman and BM.
March 22, 95	T/C from GW to BM.
March 23, 95	T/C from GW to BM, BM stated that Boynton had not given he or Firman any Bodie data. BM requested copy of BLM Manual 3891 and California Desert Protection Act. Meeting scheduled for April 4, 1995.
March 23, 95	Letter to BM regarding the March 7, 1995 T/C was returned to sender.
	Letter resent to BM.
March 25, 95	T/C from BM to GW, he is unable to supply any Bodie data without permission from RR.
April 3, 1995	Letter from Firman stating his new address.
	Office meeting with RR, LV, and GW. Requested clarification of title questions, monumentation of claims, and access to Galactic Company data.
April 4, 1995	Meeting with GW and BM, one map copied.
April 4, 1995	First Letter from FIrman appointing BM of the Lost Carcass and Buzzard Mining Co. as his agent.
April 24, 1995	Second Letter from FIrman appointing BM of the Lost Carcass and Buzzard Mining Co. as his agent.
	Letter from GW to RR, restating the results of the April 3, 1995 meeting.
March 28, 96	Voice mail from BM.
March 29, 96	Voice Mail from RR to GW, stating RR would be out of the office until April 8, 1996.
April 2, 1996	T/C from GW to BM, regarding underground sampling program of this summer.
April 11, 1996	T/C from William Boynton to GW, he requested and GW returned by mail this date all hand-written and photocopied notes sent by William Boynton. The determination was made that none was of value to be copied. Boynton received the notes on April 17, 1996.
April 17, 1996	Voice Mail from RR to GW, requesting a meeting in person.
	Voice Mail from GW to RR, suggesting a May14-15, 1996 date for the meeting.
May 21, 1996	
June 26, 1996	T/C from BM to GW, BM was unable to release any Bodie information as he had received his lease payment.
July 11, 1996	T/C from GW to BM, regarding release of data. A meeting was scheduled for July 12, 1996.
August 2, 1996	Meeting with GW and BM, additional maps and computer discs received.

August 16, 1996	T/C from William Boynton to GW, BM was to file the proper documentation removing Boynton's name from the Lost Carcass' mining claims.
January 27, 1997	Voice mail from BM, asking how the evaluation of mineralization was going.
January 29, 1997	T/C from GW to BM, giving the information he requested.
February 3, 1997	T/C from BM to GW, the original information given on January 29, 1997 was lost, he requested the information again. Information sent again.
February 12, 1997	Voice mail from BM to GW.
February 13, 1997	Note from BM to GW.
	T/C from GW to BM, discussed the mineral evaluation.
February 24, 1997	Voice mail from Garth Tallman, attorney for BM.
	T/C from GW to Garth Tallman, discussed mineral evaluation.
October 27, 1997	T/C from GW to BM asking about claimants interest in and data about the Wild Rose Claims. BM indicates that, pending advice from his tax planner, Lost Carcass may quit claim Wild Rose Claims to Calif. State Parks for a tax write-off of $20,000 per claim.

APPENDIX 7: BODIE BOWL ACEC WITHDRAWAL: LEGAL DESCRIPTION.

Federal Register Notice - Vol. 58, No. 106 / Friday, June 4, 1993 / Page 31752

(CA-940-4210-06; CACA 31729)

Proposed Withdrawal and Opportunity for Public Meeting; California

AGENCY: Bureau of Land Management, Interior

ACTION: Notice

SUMMARY: The Bureau of Land Management proposes to withdraw 7,544 acres of public lands and non-Federal lands in Mono County to protect the nationally significant historic resources within the Bodie Bowl Area of Critical Environmental Concern as well as the recreational opportunities and scenic values associated with them. The withdrawal is requested for a period of 5 years in aid of legislation under consideration by Congress. This notice closes the public lands for up to 2 years from surface entry and mining. The public lands will remain open to mineral leasing.

DATES: Comments and requests for a public meeting must be received by September 2, 1993.

ADDRESSES: Comments and meeting requests should be sent to the California State Director, BLM, 2800 Cottage Way, room E-2845, Sacramento, California 95825.

FOR FURTHER INFORMATION CONTACT: Viola Andrade, BLM California State Office, 916-978-4820.

SUPPLEMENTAL INFORMATION: On May 26 1993, a petition was approved allowing the Bureau of Land Management to file an application to withdraw the following described public lands from settlement, sale, location, or entry under the general land laws, including the mining laws, subject to valid existing rights:

Mount Diablo Meridian

T. 4 N., R. 26 E.,
Sec. 1, SE¼NE¼, S½SW¼, and SE¼;
Sec. 11, NE¼NE¼;
Sec. 12, N½, N½SW¼, SE¼SW¼, and SE¼;
Sec. 13, NE¼NE¼;
T. 4 N., R. 27 E.,
Sec 3, lot 11;
Sec 4, S½N½ and S½
Sec 5, S½SW¼ and SE¼;
Sec 6, lots 5 to 7, inclusive, E½SW, and SE¼;
Sec 7, lots 1 to 4, inclusive, E½, and E½W½;
Sec 8, N½, SW¼, N½SE¼, and SW¼SE¼;
Sec 9,
Sec 10, lots 2, 3, 7, 8 and W½;
Sec 11, W½NW¼;
Sec 14, SW¼NE¼, W½NW¼, SE¼NW¼, SW¼, and NW¼SE¼

Sec 15, lots 1 to 8 inclusive, and W½;
Sec 16,
Sec 17, W½NE¼, W½ and SE¼SE¼;
Sec 18, lot 1, NE¼, NE¼NW¼ and NE¼SE¼;
Sec 20, lots 1, 2, 3, and 8 and NE¼;
Sec 21, lots 1, 3, 4, and 5, and N½;
Sec 22, lots 1 to 4 inclusive, lots 7 and 8, and NW¼
Sec 23, N½NW¼ and SW¼NW¼

The areas described aggregate 5,935 acres of public lands and 1,609 acres of non-Federal lands in Mono County. In the event any of the non-Federal lands return to Federal ownership, they will become subject to the withdrawal.

The purpose of the proposed withdrawal is to protect the Bodie Bowl Area of Critical Environmental Concern.

For a period of 90 days from the date of publication of this notice, all persons who wish to submit comments, suggestions, or objections in connection with the proposed withdrawal may present their views in writing to the California State Director to the Bureau of Land Management.

Notice is hereby given that an opportunity for a public meeting is afforded in connection with the proposed withdrawal. All interested persons who desire a public meeting for the purpose of being heard on the proposed withdrawal must submit a written request to the California State Director within 90 days from the date of publication of this notice. Upon determination by the authorized officer that a public meeting will be held, a notice of the time and place will be published in the Federal Register at least 30 days before the scheduled date of the meeting.

The application will be processed in accordance with the regulations set forth in 43 CFR 2300.

For a period of 2 years from the date of publication of this notice in the Federal Register, the public lands will be segregated as specified above unless the application is denied or canceled or the withdrawal is approved prior to that date. The temporary uses which may be permitted during this segregative period are licenses, permits, cooperative agreements, or other discretionary land use authorizations of a temporary nature.

Dated May 28, 1993.

Nancy J. Alex,
Chief, Lands Section
[FR Doc. 93-13161 Filed 6-3-93;8:45 am]

APPENDIX 8: MINING LAWS FOR THE BODIE MINING DISTRICT

At a meeting of the miners of the Body Diggings the following Laws were adopted. The spellings and format are as in the original.

Artical -1st
This district shall be known and designated as the Body mining district and shall extend in each direction from the Body claim North, South, east & West five miles.
Artical-2d
Ravine and gulch claims shall be four hundred feet in length and extending fifty feet each side of gulch or ravine from center.
Flat claims shall be two hundred and fifty feet square. Hill claims shall be two hundred feet front and extending back to the summit or center of the hill.
Artical-3d
No person shall be allowed to hold more than one Gulch one Hill and one Flat claim in this district by location but can hold as many as he purchases in good faith.
Artical-4th
Ravine and Hill claims shall be designated by a stake & notice at each of the said claimor. Flat claims shall be designated by stake & notice at each corner.
Artical-5th
All claims shall be recorded within ten days after location or be forfeited unless picalies making their location are at work upon their claims
Artical-6th
All persons holding claims in this district shall do one days work every week on said claim when there is sufficient water to work with a long tom or rocker.
Artical-7th
All persons locating Quartz Claims in this district shall be allowed two hundred fifty feet of a quartz lead together will all its dips spurs angles & variations and together with fifty feet on each side of said quartz load for right of work.
Artical-8th
All Quartz Claims shall be recorded within ten days after location or be forfeited.
Artical 9th
All Quartz Claims shall be designated by a stake and notice giving the name of the Lead and Company also the number of feet located and names of the pArties making such location.
Artical-10th
All Quartz Claims shall be worked to amount of fifty dollars to each share within three months after location which amount of work shall hold the claims good for the term of one year from the date of location
Artical-11th
Any person or persons discovering a Quartz Ledge shall be entitled to one extra claim for discovery.
Artical-12th
All claims in this district shall be laid over and not be forfeited until from the fist day of October 1860 until the first day of May 1861.
Artical-13th
There shall be a recorder elected who shall hold his office for the term of one year and shall be entitled to fifty cents for each claim recorded.
Artical-14th
The recorder shall keep in his possession a well bound book with all the laws of this district written therein which shall at all time be subject to the inspection of the public in his presence.

On motion Jeremiah Tucker was elected recorder for the term of one year commencing at this date July the tenth -10th 1860.

E. Green, Chairman
A. D. Allen, Sec.

From the Mineral Survey Field Notes of the Palfrey Lode Mining Claim MS 853

October 24th, 1879

The following is a true copy of the written regulations of Bodie Mining District, governing the location, manner of recording and amount of work necessary to hold possession of a mining claim, as required by instructions of the U.S. Surveyor General, for California, dated September 8th, 1879 and a statement by the undersigned duly elected Recorder of said Mining District concerning the history, facts and customs of location to the best of his knowledge.

The undersigned does not pretend to properly construe the present existing laws of said District, as amended and repealed by implication and as affected by custom.

Regulations governing the location of Mining Claims.

All regulations embodied in the local laws of Bodie Mining District, concerning the location of Quartz Claims are virtually repealed by the customs now in force and regarded by the miners of said District.

The law now so made and enforced by custom being as to length of a claim. That all Quartz Claims shall be 1500 feet along the line of the lode.

That during the years 1875 and 1876 up to December 30th, 1876, ,any claims were located under the U.S. laws 1500 x 600 feet.

The question has arisen in the Courts as to whether or not there was a custom in those years authorizing the location of Claims 600 feet wide, so far the courts appear to recognize the validity of such location. The only case where the matter was directly put in issue and adjudicated was the Noonday Mining Co., against the Live Yank Co. in which the Court and Jury found that in 1876 a custom existed and was in force authorizing locations 600 feet wide.

This custom if such it was, was not reduced to writing and this office is unable to decide what is the law, beyond referring pArties to the records of the case above mentioned and also to the fact that a number of locations 600 feet wide were made during those years and recorded in the books in my possession.

Artical. 7th, August 9th, 1862. All persons locating Quartz Claims in this district shall be allowed tow hundred and fifty feet of a quartz lead, together with all its dips, spurs, angles and variations, together with fifty feet on each side of said quartz lode for right of work.

Book A Page 129. Artical. 7th Amended so that it should read two hundred feet instead of two hundred and fifty feet which reads as follows: see above.

March 3d 1866, Resolution 2nd That all locations for Quartz Claims made hereafter shall be by lineal measurement, and that all such locations be allowed fifty feet on each side of the ledge for working purposes.

March 4th, 1867, Resolution 1st. That all locations made hereafter on quartz ledges shall be by lineal measurement and fifty feet on each side of the ledge for working purposes.

Regulations governing the amt. of work necessary.

Book A Page 1, Artical. 6th All persons holding claims in this District shall do one days work every week on said claim when there is sufficient water to work with a long-tom or rocker.

Artical. 10th All quartz claims shall be worked to amount of fifty dollars to each share within three months after location, which amount of work shall hold the claim food for the term of one year form the date of location.

August 10th, A.D. 1861, Artical. 1st. Each claim on a quartz lode shall be worked to the mount of ($50) fifty dollars within three months after date of location, said work may be performed either upon his own claim or that of any other person or persons o the same lode.

Book A Page 129, Artical. 10th, All quartz claims of two hundred feet and proportions thereof shall be worked to the amt. of twenty five dollars or five days work, within three months form the time of location, which amt. of work shall hold the claim good for the term of one year form the date of location.

Nov. 12th 1862, Artical. 17- Any person or persons who may locate a site for a tunnel in this District shall run said tunnel 40 feet within one year form date of location or it shall be forfeited.

Artical. 18 Any person or persons who may locate and run a tunnel in this district for the purpose of prospecting any quartz lode or leads having a notice on the same recorded in the Recorders Office of this District and also in the County Clerks Office stating for what lode or lodes the tunnel is intended to prospect, are not required to do any work directly upon said lode or lodes but shall put the work on said tunnel as stated in Articalicle 17.

March 4th, 1864, At. 23d All labor performed on ditch reservoir or flume, for the purpose of bringing in water from Cotton Wood creek for placer mines, shall be considered as labor actually done on said placer claims.

Oct. 5th, Resolved 2nd That any person or company of persons owning placer claims in this district, shall be required to perform five days labor for each claim upon any portion of his or their claims and when so performed such claim or claims shall not be subject to relocation for the space of one year form the date of location.

March 3rd 1866, Resolved 3d, That 5 days available work shall be done for each claim of two hundred feet, such work to be performed within ninety days form date of location.

March 4th, 1867, Resolved 2nd That five days available work shall be done for each claim of two hundred fee such work to be performed within ninety days form date of location.

Nov. 13th A.D. 1867, Resolved 4th That all companies be required from and after this date, to perform available labor to the amount of one hundred dollars upon their claim or claims each and every year that tin case said labor is not performed then said claim or claims are subject to relocation.

Resolved 5th That all resolutions heretofore passed, coming in conflict with the foregoing are hereby repealed.

Regulations governing the manner of recording.

Book A Page 1, July 10th 1860, Artical. 14 The Recorder shall keep in his possession a well bound book with all the laws of the district written therein which shall be at all times subject to the inspection of the public in his presence.

Aug. 10, 1861, Artical. 5th That the Recorder shall be required to visit all new discoveries and note the same.

In the foregoing sections repeated and those intended for temporary effect are not copied.

Leo A. Scowden
U.S. Dep. Min. Surv.

I, Geo. MacArticalney, the duly elected Recorder of the Bodie Mining District in the County of Mono, State of California, do hereby certify that the above statement of facts is true to the best of by knowledge and the sections copied from the local regulations are a true and correct copy thereof.

Witness my hand this twenty-fourth day of October A.D. 1879.

GEO. MACArticalNEY, Mining Recorder.

APPENDIX 9: DESCRIPTIVE MODEL OF THE COMSTOCK EPITHERMAL VEINS

Model based on Cox and Singer, 1986, p. 150-151, Model 25c.

By Dan L. Mosier, Donald A. Singer, and Byron R. Berger

APPROXIMATE SYNONYM: Epithermal gold (quartz-adularia) alkali-chloride type.

DESCRIPTION: Gold, electrum, silver sulfosalts, and argentite in vuggy quartz-adularia veins hosted by felsic to intermediate volcanic rocks that overlie predominantly clastic sedimentary rocks, and their metamorphic equivalents

GEOLOGICAL ENVIRONMENT

Rock Types: Host rocks are andesite, dacite, quartz latite, rhyodacite, rhyolite; and associated sedimentary rocks. Mineralization related to calc-alkaline or bimodal volcanism.

Textures: Porphyritic.

Age Range: Mainly Tertiary (most are 4O-3.7 m.y.).

Depositional Environment: Calc-alkaline and bimodal volcanism and associated intrusive activity over basement rocks composed of clastic sedimentary rocks and their metamorphic equivalents. Volcanic-related geothermal systems lack access to saline fluids from basement sources.

Tectonic Setting(s): Through-going fracture systems, major normal faults, fractures related to doming, ring fracture zones, joints.

Associated Deposit Types: Placer gold and epithermal quartz-alunite Au.

DEPOSIT DESCRIPTION

Mineralogy: Argentite ± gold or electrum ± silver sulfosalts ± naumannite. Galena, sphalerite, chalcopyrite, tellurides, hematite, and arsenopyrite are moderate to sparse. Gangue minerals are quartz ± pyrite ± adularia ± calcite ± sericite ± chlorite. Barite, fluorite, rhodochrosite, kaolinite, and montmorillonite are moderate to sparse. Ore minerals constitute only a few percent of vein.

Texture/Structure: Banded veins, open space filling, lamellar quartz, stockwork.

Alteration: From top to bottom of system: quartz ± kaolinite ± montmorillonite ± zeolite ± barite ± calcite; quartz ± illite; quartz ± adularia ± illite; quartz ± chlorite; presence of adularia is variable.

Ore Controls: Through-going anastomosing fracture systems, centers of intrusive activity. Hanging wall more favorable.

Weathering: Bleached country rock, limonite, jarosite, goethite, alunite, hematite, argillization with kaolinite.

Geochemical Signature: Higher in system Au + As + Sb + Hg or Au + As + Cu; Au + Ag + Pb + Cu; also Te and W.

EXAMPLES

Comstock, USNV (Becker, 1882)
Guanajuato, MXCO (Buchanan, 1980; Wandke and MArtinez, 1928)

DEPOSITS

Name	Country
Aurora	USNV
Bodie	USCA
Bovard	USNV
Calico	USCA
Calistoga	USCA
Comstock	USNV
Divide	USNV
Dolores	MXCO
El Rincon	MXCO
Fairview	USNV
Fuke	JAPN
Gold Mountain	USUT
Guanacevi	MXCO
Guanajuato	MXCO
Hostotipaquilla	MXCO
Katherine	USAZ
Kushikino-Arakawa	JAPN
Moohikoshi	JAPN
Mogollon	USNM
Nawaji	JAPN
Oatman	USAZ
Ohguchi	JAPN
Ohito	JAPN
Olinghouse	USNV
Orient	USWA
Patterson	USCA
Republic	USWA
Rosario	HNDR
Sand Springs	USNV
Searchlight	USNV
Seikoshi	JAPN
Seven Trough	USNV
Sheep Tank	USAZ
Silver City	USNV
Taio	JAPN

Tayoltita	MXCOT
Toi	JAPN
Tonopah	USNV
Tuscarora	USAZ
Weaver	USAZ
Yugashima	JAPN

APPENDIX 10: SURFACE DISTURBANCES IN THE BODIE BOWL

This inventory is not comprehensive. It describes surface mining disturbances on BLM land and also on some private lands. This listing matches the sites indicated on **Map 9**.

Map ID	Field ID	Description
1	7-4	Pit--6' long, 3' wide (north/south) 3' deep highly fractured light gray feldspar without foliation N55 W. (LV)
2	7-5	Pit--adit trench is driven N55 W 75' in collapsed adit in highly altered-earthy fractured volcanic rock. Portal partially open. Chalcedony/quartz on dump. (LV)
3	7-27	Pit about 130' diameter 210' deep in broken light gray rock, no in place outcrop. (LV)
4	7-23	Pit--about 15' diameter, 4' deep, dump reddish yellow lots of chalcedony, upslope rock has yellow line. (LV)
5	7-18	Pit--about 10' diameter, 2' deep, dump is yellow-red altered/ upslope fresh. (LV)
6	7-17	Shaft--caved in clayey rock, 175' diameter less than 50' deep, filled at bottom, chalcedony on dump. (LV)
7	7-16	Pit--possibly caved shaft-10' diameter, 2' deep, highly altered dark yellow in white rock. (LV)
8	7-26	Pit, 10' diameter, 2' deep. (LV)
9	7-25	Pit, 25' diameter, 4' deep, chalcedony. (LV)
10	7-19	Pit--about 10' diameter, 2' deep. (LV)
11	7-20	Pit--about 10' diameter, 2' deep. (LV)
12	7-21	Pit--about 15' diameter, 3' deep (7-19 and 7-21 are about 25' apart, weathered surface of rock is brick red). (LV)
13	7-10	Pit barely 1' deep about 15' diameter, however just below it is dump ? of altered rock, caliche-like crust, gypsum crystal found, light yellow. (LV)
14	7-11	Shallow trench about 100' long, 10' wide, 4' deep. (LV)
15	7-13	Pit, at colluvium fresh rock contact. Colluvium is yellowish, about 20' long, 15' wide, 3' deep, about 300 yards south of Red Cloud Mine. (LV)
16	4-86	Trench Northeast of 85, small - 30' long, 5' wide, about 4' deep in surface alluvium. (CS)
17	4-84	Trench, 30' long, 5' deep recently sampled during placer exam. (CS)
18	7-14	Pit--highly altered clay like material on dump, yellow-orange pit is about 20 diameter, 4' deep, some fresh volcanic rock on dump and iron stained. (LV)
19	4-87	Trench, round 20' diameter, 10' deep, rock type - dark gray dacite porphyry. (CS)
20	4-88	Round trench, 20' diameter, 10' deep, alluvial soils, no outcrops. (CS)
21	4-90	Trench--50' Northwest of 89, follows shallow 50' long trench of stream channel to very small trench approximately 10' diameter, 3' deep. (CS)
22	4-89	Trench--North of 88, same as 88 only smaller - 20' diameter, 2' deep. (CS)
23	4-94	Pit or filled-in shaft - 30' diameter, round 7' deep - black dacitic rocks around hole. (CS) Note: A large amount of trenches here could be stock piles of ore on both sides, or pushed out to make better drainages.
24	6-62	Pit; 25' long, 15' wide, 10' deep, altered bedrock exposed on one wall, abundant limonite, altered, no bleached material, sample locality adjacent to pit. (SAMPLE 77) (TS/ML)
24	6-67	Pit; 15' long, 15' wide, 8' deep, abundant altered dump material, brown to buff color, abundant limonite, some bleaching, no outcrop, MnO_2. (TS/ML)

Map ID	Field ID	Description
26	6-71	Shaft; large dump, shaft very deep, dump material contains altered and bleached material, abundant hematite and limonite staining, quartz fragments on dump, also gray unaltered dacite on dump. (TS/ML)
27	6-69	Trench; 60' long, 20' wide, 8' deep, alluvium, no outcrops. (TS/ML)
28	6-70	Pit; 15' long, 15' wide, 8' deep, bedrock exposed SW wall, gray dacite, relatively unaltered, minor limonite, no bleaching, pit about 35' from park boundary, 2 smaller pits adjacent to north, possible sample locality. (TS/ML)
29	6-52	Caved shaft or large pit; 20' long, 20' wide, 12' deep, alluvium, dump material small particle size, altered, limonite staining, buff color, minor bleached material. (TS/ML)
30	6-51	Pit; 10' long, 10' wide, 5' deep, exposed bedrock, bleached and altered, hematite and limonite staining, quartz veinlets on surface material. (SAMPLE 86) (TS/ML)
31	6-57	Pit; 10' long, 10' wide, 4' deep, contact of altered rock and gray relatively unaltered rock, alluvium, half of dump is reddish buff color and half is gray, possible sample locality. (TS/ML)
32	6-56	Caved shaft; 20' long, 15' wide, 10' deep, exposed bedrock, buff to tan color, altered rock, limonite staining. (SAMPLE 89) (TS/ML)
33	6-53	Pit or caved shaft; 20' long, 20' wide, 8' deep, altered buff-colored dump, hematite and limonite staining, black mineral MnO_2? (TS/ML)
34	6-54	Pit; 10' long, 10' wide, 5' deep, large dump fragments, bedrock exposure, altered, limonite staining, larger dump fragments are less altered, gray color. (SAMPLE 88) (TS/ML)
35	6-55	Small pit; 5' long, 5' wide, 2' deep, bedrock exposure, gray fairly unaltered. (TS/ML)
36	6-49	Open adit; unknown size, abundant bleached and hematite stained dump material, from size of dump adit probably not very large. (TS/ML)
37	6-48	Pit; 15' long, 20' wide, 8' deep, alluvium, bleached dump material, abundant hematite and limonite staining. (TS/ML)
38	6-47	Caved shaft; 50' long, 50' wide, 12' deep, large dump, altered rock, tan to buff color, not abundant bleached material, abundant hematite and limonite staining. (TS/ML)
39	6-61	Pit; 25' long, 25' wide, 8' deep, very bleached dump material, altered rock, limonite staining, no outcrop. (TS/ML)
40	6-58	Trench; 50' long, 8' wide, 3' deep, alluvium, no outcrop. (TS/ML)
41	6-31	Trench; 90' long, 6' wide, 3' deep, alluvium, no outcrop. (TS/ML)
42	6-35	Pit; 25' long, 20' wide, 6' deep, alluvium, no outcrop, bleached bedrock. (TS/ML)
43	6-33	Trench; 50' long, 12' wide, 10' deep, alluvium, no outcrop. (TS/ML)
44	6-34	Pit; 12' long, 10' wide, 5' deep, alluvium, no outcrop, bleached dump material. (TS/ML)
45	6-36	Trench; 50' long, 10' wide, 4' deep, alluvium, no outcrop. (TS/ML)
46	6-41	Pit; 15' long, 15' wide, 5' deep, alluvium, no outcrop, bleached dump with hematite and limonite. (TS/ML)
47	6-42	Pit; 12' long, 12' wide, 4' deep, alluvium, no bedrock exposed, 2 small pits (5' wide, 5' long, 2' deep) adjacent to larger pit. (TS/ML)
48	6-43	Pit; 12' long, 12' wide, 4' deep, alluvium, no outcrop, minor limonite and hematite, bleached material. (TS/ML)

Map ID	Field ID	Description
49	6-26	Pit; 20' long, 10' wide, 3' deep, alluvium, silica boulders (sinter?) on float, no outcrop. (TS/ML)
50	6-29	Caved shaft; 30' long, 30' wide, 15' deep, altered and bleached, bedrock white to gray color, probably is patented claim, no outcrop. (TS/ML)
51	6-24	Pit; 15' long, 15' wide, 8' deep, alluvium, silica boulders (sinter?) on float, no outcrop. (TS/ML)
52	6-25	Pit; 10' long, 10' wide, 4' deep, alluvium, silica boulders (sinter?) on float, no outcrop. (TS/ML)
53	6-27	Trench; 40' long, 5' wide, 4' deep, alluvium, silica boulders (sinter?) on float, no outcrop. (TS/ML)
54	6-23	Pit; 10' long, 10' wide, 4' deep, alluvium, silica boulders (sinter?) on float, no outcrop. (TS/ML)
55	6-21	Pit; 10' long, 10' wide, 3' deep, alluvium, no outcrop. (TS/ML)
56	6-20	Pit; 15' long, 10' wide, 4' deep, water-filled, alluvium, no outcrops. (TS/ML)
57	6-17	2 pits adjacent to each other about 10' long, 10' wide, 5' deep each, mostly alluvium, boulders of silica (sinter?), no outcrops. (TS/ML)
58	6-18	Trench; 75' long, 15' wide, 8' deep, alluvium, no outcrop. (TS/ML)
59	6-13	Pit; 30' long, 20' wide, 10' deep, dump material is very bleached and altered, no bedrock exposed, less-altered rock on very top of dump. (TS/ML)
60	6-6	Circular pit; 15 dia' wide, 6' deep; dump is bleached and altered rock, abundant hematite staining. (TS/ML)
61	6-5	Pit; 12' long, 8' wide, 5' deep; alluvium, bleached, altered rock, no visible structure or outcrop. (TS/ML)
62	6-39	Pit; 10' long, 10' wide, 3' deep, alluvium, no outcrop, minor limonite and hematite. (TS/ML)
63	6-11	Pit; 30' long, 25' wide, 10' deep, very bleached and altered dump material, hematite and limonite, no outcrops. (TS/ML)
64	6-10	Pit; 25' long, 25' wide, 12' deep, probably deeper shaft at one time, dump has very bleached rock, limonite and hematite staining, no outcrops. (TS/ML)
65	6-64	Trench; 50' long, 20' wide, 5' deep, light-colored alluvium, no bedrock. (TS/ML)
66	6-63	Trench; 50' long, 15' wide, 5' deep, light-colored alluvium, no bedrock. (TS/ML)
67	6-66	Trench; 35' long, 15' wide, 4' deep, light-colored alluvium, no bedrock. (TS/ML)
68	6-65	Caved shaft; large dump, foundation for hoist, altered and bleached dump material, hematite and limonite. (TS/ML)
69	3-21	Pit; 20' long, 15' wide, 8' deep, alluvium, no bedrock, minor limonite. (TS/ML)
70	3-24	Pit; 15' long, 15' wide, 8' deep, alluvium, no bedrock, minor limonite, minor quartz on dump. (TS/ML)
71	3-23	Pit; 20' long, 8' wide, 4' deep, alluvium, no bedrock, minor limonite, minor quartz on dump. (TS/ML)
72	3-22	Pit; 20' long, 20' wide, 8' deep, alluvium, no bedrock, minor limonite, minor quartz on dump. (TS/ML)
73	3-19	Shaft; about 20' deep, may be drift at bottom, collar is 10' long, 15' wide, alluvium, no bed rock exposed. (TS/ML)
74	4-73	Pit 40' diameter at opening, 10' diameter at base, 20' deep, dried mud in base, in very fine grained material. (CS)

Map ID	Field ID	Description
75	4-69	Small trench, 5' diameter, 3' deep. (CS)
76	4-65	Pit or caved in winze in colluvial material broken up dacite rock fragments, 75' long, 20' wide decreasing to width to 10', deepest part about 5', depth upslope gradually increases to 2', trends N75 E. (CS)
77	4-68	Small trench, 5' diameter, 3' deep. (CS)
78	4-67	Adits--Between the claim post North end of center of 85, Union Pacific, 1979, and the discovery monument of Union Pacific #2 with location papers are several adits, rock debris slope and pit. Adit opening has timbers in base opening, is covered with dacite, some dark gray porphyry - dacite? around area no visible rock formations, trends N75 E. Large pit West of adit, 50' diameter round, light dacite - fine grained material on West side. East side rock debris slope mixed dacites. (CS)
79	4-64	Trench, same as 63 only larger, 20' diameter slopes to 4' diameter at base 5' depth, lighter material includes greenish dacite. (CS)
80	4-66	Round pit - colluvial slope material - dacite, 20' diameter opening narrows to 1' diameter at base, no rock outcrops or significant vein structures. Claim post down slope (West) of pit Southeast corner, Zeus 86A, 1979 80'. (CS)
81	4-61	Trench, 200' long, 20' wide, 10' deep west end - shallow 2' deep east end, N70 E. (CS)
82	4-55	Adit, timbered approximately 50' back into mountain side, opening (4' wide, 2' height) is half covered with rock debris. Reddish gray dacite, large rocks, N5 E 68 E. Opening - must climb down rock debris slope about 10' then shaft is about 8' tall, tailing piles at down slope of adit. (CS)
83	4-56	Round opening maybe winze for adit #55 above. Caved in winze about 20' diameter, base only 2' diameter, 10' deep. No rock outcrop, dacite rock fragments. (CS)
84	4-46	All pits linked together with shaft on South end. Same rock type. (CS)
85	4-47	Pit 50' diameter just above shaft 46. East of 46. 30' deep gray dacite. (CS)
86	4-44	Shaft or winze, bottom most visible, same trend as shaft 43 opening 5' diameter in gray dacite is about 50' down slope from 43. (CS)
87	4-43	Huge shaft - timbered opening in either faulted opening of dacite or vein that has been removed. Unsafe chain-link fence around opening. Wall trends N15 E, 80 S, gray dacite, Kaolinite alteration same greenish clay, also, dump below shaft - lots of greenish dacite with adularia veining in it. (CS)
89	4-41	Small pit - 5' diameter, 2' deep in colluvium. (CS)
90	4-42	Trench or ditch? approximately 300' long, 3' wide in colluvium. No visible outcrops. (CS)
91	4-48	Rock mound - waste ore dump, gray dacite. (CS)
92	4-40	Pit not as steep walls as 39. Gray dacite with kaolinitic alteration stacked on south side, gray to white dacite, 2" diameter rock fragments (obviously worked) on south perimeter of pit. 20' deep. (CS)
93	4-39	Pit or caved in shaft, has rock wall on south side, gray dacite dome reddish banding, kaolinitic alteration? Opening 20' diameter, round 20' deep. (CS)
95	4-70	Large pit 50' diameter round 8' deep, dacite with white fine grained dacite on west edge of pit. (CS)
96	4-81	Large shaft with motor house on West side, fenced, because of cave-ins around it. Could not determine depth. Has hoist house and cement entry walls about 200' diameter. (CS)

Map ID	Field ID	Description
97	3-14	Caved shaft; timbered ore shoot, 4' long, 5' wide, 10' deep, then caved, about 50' from pit #13. (TS/ML)
98	3-13	Pit; 10' long, 15' wide, 8' deep, may have been shaft, timber present, very large dump, abundant quartz vein material, adularia?, hematite and limonite stain, bleaching, most rock altered, some less altered, gray dacite. (TS/ML)
99	3-15	Pit; 5' long, 5' wide, 3' deep, alluvium, no bedrock, dump has limonite and hematite, altered dacite. (TS/ML)
100	3-9	Pit; same as #8. (TS/ML)
101	3-8	Pit; 10' long, 10' wide, 4' deep, small fragments on dump, mostly bleached and altered, limonite and hematite staining, no bedrock exposed. (TS/ML)
102	3-2	Trenches, 2 small trenches adjacent to each other, about 30' long, 6" wide, 2' deep, alluvium, dump material is somewhat bleached and altered dacite ?, abundant limonite and hematite, no bedrock exposed. (TS/ML)
103	3-1	Pit; 10' long, 12' wide, 5' deep, altered and unaltered rock, dacite is gray and porphyritic, quartz veinlets on dump material, no bedrock exposed, abundant limonite and hematite staining, minor MnO_2. (TS/ML)
104	3-3	Shaft; >20' deep, dump material has bleached and altered dacite, abundant limonite staining, some chalcedonic quartz, no was to sample shaft. (TS/ML)
105	3-4	Trench; 75' long, 20' wide, 10' deep, not really alluvium but rock ruble, altered and some bleaching, abundant limonite. (TS/ML)
106	3-5	Adit; from the size of dump adit is fairly large, altered and bleached material, adit is accessible thru 2' long--3' wide opening, trench leading to adit was timbered and now caved, 2 buildings. (TS/ML)
107	3-6	Shaft; hoist house with hoist in it, probably shaft probably intersects adit, can see rail 20' below surface (level of adit), dump is altered, limonitic, dacite ?, some bleaching on edge of private land. (TS/ML)
108	3-26	Pit; 10' long, 10' wide, 5' deep, alluvium, no bedrock, overgrown vegetation. (TS/ML)
109	2-11	Shaft--less than 20' in highly fractured bedrock, bleached. (LV)
110	2-8	Pit, 15' diameter, about 3' deep bleached bedrock, hematite cemented breccia, poor exposures. (LV)
111	2-9	Pit, 15' diameter, 3' deep bleached iron oxide stained bedrock, possible sample site-but poor exposure. (LV)
112	2-12	Pit, 30' diameter, 6' deep, intensely bleached bedrock--hematite cemented breccia. (LV)
113	2-6	Pit, bleached rock on dump 20' diameter, no outcrop in pit. (LV)
114	2-5	Bleached bedrock at base of cliff. 4' long, 4' wide, 6' deep in face. Similar rock in dump 75' to the north. (LV)
115	2-4	Trench, about 50' north of Sample 67 at base of talus slope, trench about 15' long, 10' wide, 4' deep, may possibly be dugout/cabin site. (LV)
116	2-1	Pit, about 20' diameter, 3' deep dump no bedrock, very light tan-altered. Fresh hematite cemented breccia on dump. (LV)
117	2-35	Pit--20' diameter, 6' deep in hematite cemented breccia. (LV)
118	2-34	Adit, about 200' to south of samples 64-65, N5 W, more that 50' long in hematite cemented breccia with secondary quartz on fractures. (LV)

Map ID	Field ID	Description
119	2-33	Pit--20' diameter, 10' deep bleached hematite cemented breccia, secondary quartz, sulfides, and barely altered gray volcanic rocks on dump. (LV)
120	2-40	Pit--15' diameter, 4' deep in hematite cemented breccia, sulfides, quartz. (LV)
121	2-31	Shaft, remnants of caved shaft 25' diameter about 20' deep, light gray, barely altered rock, feldspar altering to clay, also bleached hematite cemented breccia, secondary quartz. (LV)
122	2-30	Pit, 15' diameter, 5' deep, minor secondary quartz. (LV)
123	2-27	Pit, 15' diameter, 3' deep, no bedrock in pit, hematite cemented breccia on dump. (LV)
124	2-29	Pit, 15' diameter, 3' deep, more bleached hematite cemented breccia. (LV)
125	2-28	Pit, 15' diameter, 3' deep, no bedrock in pit, hematite cemented breccia on dump and bleached hematite cemented breccia. (LV)
126	2-39	Pit--15' diameter, 5' deep in hematite cemented breccia, quartz. (LV)
127	2-38	Pit--15' diameter, 10' deep in hematite cemented breccia, no outcrop. (LV)
128	2-37	Pit, 6' long, 8' wide, 3' deep pit in hematite cemented breccia, no outcrop, sulfides. (LV)
129	2-36	Shaft--15' diameter more than 20' deep, bleached hematite cemented breccia with secondary quartz, sulfide smell and euhedral quartz in vugs, no outcrop. (LV)
130	3-30	Shaft; fairly large, intersects drift, dump material altered and minor bleaching, quartz fragments on dump, MnO_2? coatings, vein material, some quartz is botryoidal. (TS/ML)
131	3-32	Pit; 15' long, 10' wide, 6' deep, alluvium, no bedrock, large boulders on wall of pit resembles bedrock. (TS/ML)
132	3-33	Pit; 10' long, 10' wide, 8' deep, alluvium, no bedrock. (TS/ML)
133	3-34	Pit; 15' long, 15' wide, 6' deep, alluvium, no bedrock. (TS/ML)
134	4-S20	Caved shaft, no outcrop, stone foundations for hoist to north of shaft. (GW)
135	4-S17	Caved shaft, 25' deep, no outcrop, unsafe. (GW)
136	4-51	Base of trench ? Vindicator Placer, sampled with backhoe 10/17/95. Dacite through out trench, no rock outcrops noticeable. Trench about 200' long, 10' wide, 5' deep. (CS)
137	4-52	Caved in adit or winze. Opening covered in colluvial soils, purple dacite with some chalcedony rock fragments (not many). No outcrop orientations. (increases in V shape opening and less slope, caved adit.) (CS)
138	4-A3	Adit, Caved with ruins of timbered portal 30' long there is a wooden cabin north of the adit and a large dump to the northwest. (GW)
139	4-S30	Open shaft, 10' long, 5' wide, 15' deep opening in purple dacite. Follows chalcedony vein 1/8-1/2" wide, N17 E, 80 E. There is a barbed wire enclosure around the shaft. (GW)
140	4-A6	Adit, Caved, no outcrop. (GW)
141	4-S27	Caved shaft follows 3-8" wide chalcedony vein in purple dacite with brown iron oxides on fractures. Sample #50 taken here. (GW)
142	4-S24	Open shaft, less than 50' deep, unsafe, in purple dacite 4-6" wide fractured chalcedony vein NE-SW85 E. (GW)
143	4-P18	Pit, 10' long, 10' wide, 0-3' deep in purple dacite, chalcedony vein 1/2-1" wide trends N-S80 E on east side of P-17. (GW)
144	4-P21	Pit, 20' long, 10' wide, filled with debris, no outcrop. (GW)
145	4-S33	Open shaft, less than 40' deep, unsafe, in purple dacite. No vein seen. (GW)
146	4-A5	Adit, Caved, remains of stone building of portal. No outcrop. Adit trends N10 W. (GW)

Map ID	Field ID	Description
147	4-P5	Pit, 35' long, 35 wide, northwest side Bodie Bluff, no outcrop. 2 square yards of chalcedony veins up to 6" wide on northwest pArt of much pile, 15' deep. (GW)
148	4-P19	Pit, 15' long, 15' wide, 1' deep, outcrop poorly exposed. (GW)
149	4-S26A,B	Two pits from stope collapsed. Some outcrops in north pit, unsafe, in purple dacite. (GW)
150	4-S8	Vertical shaft along vertical chalcedony vein up to 1' wide, sample ship #42, taken west of shaft. (GW)
151	4-S29	Open shaft, less than 50' deep, N-S50 E along 4-6" wide chalcedony vein east of this shaft about 25' is a trench that follows a fracture zone with chalcedony veinlets up to 3" wide in a zone 4' wide. (GW)
152	4-P15	Pit, 10' long, 10' wide, 3' deep, no outcrop. (GW)
153	4-S19	Caved shaft, no outcrop, some timbers still in muck.
154	4-S22	Caved shaft, no outcrop. (GW)
155	4-P17	Pit, 15' long, 20' wide, 3' deep, no outcrop, muck pile has kaolinitic altered dacite. (GW)
156	4-A2	Adit, Caved, a pile of old timbers and siding is on the east side of the dump for this adit, probably from ore loading facility. (GW)
157	4-P14	Pit, 20' long, 10' wide, 4' deep, caved, no outcrop. Large conical muck pile to north of this pit. (GW)
158	4-S9	Open shaft, inaccessible southwest side Bodie Bluff, 2' wide chalcedony vein northeast/southwest. (GW)
159	4-P3	Pit, 10' long, 20 wide, 3' deep, no outcrop. (GW)
160	4-P2	Pit, 25' long, 25 wide, 6' deep no outcrop. (GW)
161	4-53	Trench, small 20' diameter, 5' deep, round, dacite, white to gray with red staining, no rock outcrop or exposures. White dacite on northwest side is worked and noticeably different that reddish-gray dacite in place. (CS)
161	4-S3	Shaft, At Bodie Bluff Summit open, inaccessible, unsafe, remains of stone building on northwest side of shaft. (GW)
162	4-S4	Shaft, Northeast edge of Bodie Bluff summit, open, inaccessible, chalcedony veinlets in brown dacite trend northeast/southwest. (GW)
162	4-54	Caved in winze or adit (small) with trench below, trench small - 50' long, 5' wide, 3' deep, in dacite with white to gray dacite (small fragments) at base of slope, no rock outcrops or exposures in colluvium. (CS)
163	4-S2	Shaft, Just south of Bodie Bluff summit, caved, unsafe, outcrop exposed north side, white potassic altered dacite, claim post marked. (GW)
164	4-S5	Shafts, Set of 3 surface openings to a stope trending northeast/southwest along a 2' wide chalcedony vein. Southernmost working 25' is caved. Central working 6' long, 3' wide, open to less than 50 ft, Northernmost working is largest 20' long, 35' wide, less than 50 ft. deep. (GW)
164	4-S6	Shaft in brown dacite with many small white chalcedony veins. Has wooden ladder in good shape in access way to lower levels. (GW)
165	4-P12	Pit, 20' long, 20' wide, 4' deep, no outcrop. (GW)
166	4-P7	Three pits in a row north/south each 15' long, 15' wide, 3' deep, no outcrops. Southern pit has trench 20' long to east and 10' long to west. (GW)

Map ID	Field ID	Description
167	4-P8	Two pits each 15' long, 15' wide, 6' deep. Some outcrops of silicified, iron stained paste in south pit. (GW)
168	4-S10	Partly caved shaft on gray chalcedony vein northeast/southwest 70 W. (GW)
169	7-24	Trench--about 75' long, 20' wide, 10' deep in altered rock-white on dump. (LV)
170	7-7	Trench--developed spring with pipe to water tank/trough. Lots of highly altered rock below in dump-pure white. Most feldspars altered. Some chalcedony. Only colluvium in wall of trench. Trench is about 100' long, 125' wide, north-south. (LV)
171	7-6	Trench--at pole 168732 (310J) trench in alluvium with lots of ash, about 13' deep, 50' long, 15' wide. (LV)
172	7-8	Trench N10 W in ash-laden colluvium about 150' long, 15' wide, 4' deep. (LV)
173	7-9	Trench north-south in colluvium 125' long, 15' wide, 4' deep. (LV)
174	7-12	Trench about 50' long, 10' wide, 2' deep in colluvium. (LV)
175	7-15A	Trench--50' long, 3' wide, 2' deep in altered rock-silicified, with yellow color. (LV)
176	6-68	Trench; 50' long, 20' wide, 10' deep, alluvium, no outcrops. (TS/ML)
177	6-40	Trench; 55' long, 12' wide, 6' deep, alluvium, no outcrop, minor limonite and hematite. (TS/ML)
178	6-16	Trench, 75' long, 10' wide, 6' deep, in alluvium, vegetation cover, no outcrop. (TS/ML)
179	6-4	Surface scrape; 75' long, 60' wide, 1-2' deep; alluvium, no outcrop. (TS/ML)
180	6-7	Adit; approx. 30', either caved or ends, appears to be in alluvium, dump has bleached and altered wall rock, hematite staining, trench about 50' long leads to adit. (TS/ML)
181	6-3	Surface scrape; 75' long, 30' wide, 1-2' deep; alluvium, no outcrop. (TS/ML)
182	4-60	Trench, dacite, same as others above, 100' long, 10' wide, 4' deep, trends N30 E. (CS)
183	4-58	Trench, long and shallow -trends N10 E, 100' long, 5' wide, 3' deep. (CS)
184	4-59	Trench and tailing pond on west end approximately 300' long, 20' wide, west end 10' deep, east end 4' deep, trends N50 W. (CS)
185	4-62	Is small trench, round or caved-in winze, 20' diameter, 5' deep. (CS)
186	4-T10	Trench, 240' long, 5' wide, 3' deep, no outcrop. (GW)
187	4-T8	Trench, 60' long with much pile to west, no outcrop, 1-4' deep. (GW) Trench, 80' long, 5' wide, 2' deep, debris has fallen into trench, a pit, 10' long, 10' wide, 3' deep is on the east end, no outcrop. (GW)
188	4-T6	Trench, South and perpendicular to T-5, 85' long 2-3' deep, no outcrop. (GW)
190	4-S11	Trenches and open stopes, 225' long series. Upper (southern) pArt of stopes show chalcedony vein 1' 6" wide. (GW)
191	4-S12	Continuation of trenches with some open stopes northward from S-11. There is a small pit at a leveled area in the center of this excavation system that follows a chalcedony vein. (GW)
192	2-24	Trench N60 E, about 100' long, 10' wide, 6' deep, bleached rock, secondary quartz on fractures. (LV)
193	2-17	Trench N40 E about 50', no bedrock. (LV)
194	2-18	Pit--25' diameter, 15' deep, bedrock exposed, not bleached. (LV)
195	3-7	Trench; 100' long, 10' wide, 2' deep; alluvium, no exposed bedrock. (TS/ML)
196	3-12	Trench; 100' long, 20' wide, 12' deep, alluvium, no bedrock, flooded. (TS/ML)
197	3-11	Trench; 75' long, 20' wide, 6' deep, alluvium, no bedrock, flooded. (TS/ML)

Map ID	Field ID	Description
198	4-6T	Pit, 20' diameter, 10' deep, partially caved in reddish porphyry, some quartz veins. (GW)
198	6-59	Trench; 50' long, 8' wide, 3' deep, alluvium, no outcrop. (TS/ML)
199	4-77	Trench, 48' long, 25' wide, 6' slope, North side, 3' slope South side, N40 W. (CS)
199	3-31	Trench; 100' long, 10' wide, 4' deep, alluvium, no bedrock. (TS/ML)
200	4-T2	Trench, 75' long, 25' wide, soils only. (GW)
201	4-49	Trench fill in with rock debris. 30' long, 5' deep no outcrops exposed. (CS)
202	4-S18	One shaft and two pits. South shaft still has caved timbers in it and is partly opened, but unsafe. To the north of this are two pits. The one nearest the shaft exposes a tunnel leading southeast to the shaft. Northwest of these pits is another shaft that marks the southeast continuation of S-16. This shaft is caved at a depth of 30'. It follows a fault. (GW) . 10' wide shaft with gray chalcedony veins up to 1' wide. Unsafe. North of the northern shaft is the foundation for a hoist(?). (GW)
203	4-S23	Stope, 75' long, caved to the southwest, open to the northeast. A-3 projection would intersect it in gray-purple dacite. Fault zone 2 1/2" wide with chalcedony veinlets up to 2" wide E-W80 S. Many stulls in stop, wooden shaft (?) structure at northeast end of stope. (GW)
204	2-7	Pit--15' diameter, 4' deep at base of cliff in bleached hematite cemented breccia. Good potential sample site. Faults which cut, have abundant iron oxides. N38 E, dip 78 W. (LV)
205	2-19	60' trench @ S40 E, 10' wide, 4' deep, large amount of chalcedony with iron oxides. Just above fresh rock is altered light gray may be collapsed adit with secondary quartz. No outcrops. (LV)
206	2-20	30' trench S50 E, 15' wide, 4' deep in bleached light gray rocks, possible sample site (stamp mill on Bodie Creek, 2, five stamp batteries in place). (LV)
207	4-P32	Pit, 10' long, 10' wide, 2' deep, gray tuff in muck pile, no outcrop. (GW)
208	4-S32	Caved shaft, no outcrop, possible adit. Two roads go up to it from the north. (GW)
209	4-S31	Caved shaft, 10' wide, 10', wide, 15' deep opening follows banded chalcedony vein 2-3" in wide N30 E, 40 S, in gray dacite some kaolinitic alteration. (GW)
210	4-P22	it, 10' long, 5' wide, 3' deep, in purple dacite with 1/8" wide chalcedony veinlets in various orientations. Iron oxide within fractures. (GW)
210	4-92	Filled shaft? Ore shute pile extends East from possible shaft. Trench like exposure now - 20' diameter, 10' deep, wood posts exposed in ore. (CS)
211	4-A4	Collapsed, in purple dacite. No vein exposed. (GW)
212	4-S7	Series of excavations along a stoped vein system, 200' long northeast/southwest. Muck contains grey chalcedony veins up to 8" wide. (GW)
213	4-S13	Wide trenches and open stopes following 2' wide chalcedony vein N-S85 E. Unsafe entry. Sample #44 taken at north end. (GW)
214	4-P10	Pit, 25' long, 10' wide with muck pile on northeast side. South side covered over with debris pushed down from above, no outcrop. (GW)
215	4-P11	Pit, 15' long, 15' wide, 6' deep, caved, no outcrop. Southwest continuation of S13 sample #46, taken west of this pit. (GW)
216	4-P20	Pit, 20' long, 10' wide, 3' deep in gray dacite with chalcedony veinlets 1/8-1" wide and one vein of chalcedony, 6" wide trending NW-SE80 N. (GW)
217	4-S15	Open shaft, less than 50' deep, unsafe. Follows fault zone 3' wide with 6" chalcedony vein in hanging wall, E- W80 S. (GW)

Map ID	Field ID	Description
218	4-S14	Shaft, Caved outcrop on east wall, unsafe. (GW)
219	4-A1	Adit, Caved. (GW)
220	4-P16	Pit, 20' long, 10' wide, 3' deep, no outcrop. (GW)
221	4-T7	Trench, 300' long, 1-2' deep, no outcrop. (GW)
222	3-18	Trench; 50' long, 12' wide, 10' deep, alluvium, no bedrock, large dump, probably caved adit or shaft nearby. (TS/ML)
223	3-20	Pit; 20' long, 15' wide, 8' deep, alluvium, no bedrock, minor limonite. (TS/ML)
224	6-8	Trench; 100' long, 40' wide, 6' deep; exposes bleached rock with hematite staining. (TS/ML)
225	6-9	Small pit; 10' long, 10' wide, 5' deep; exposed float material is bleached,, limonite and hematite stained, no outcrop. (TS/ML)
226	6-19	Very shallow surface scrape; 10' long, 10' wide, 1' deep, alluvium, no outcrop. (TS/ML)
227	6-30	Pit; 20' long, 15' wide, 6' deep, alluvium, no outcrop. (TS/ML)
228	6-22	Trench; 30' long, 5' wide, 2' deep, alluvium, no outcrop. (TS/ML)
229	6-28	Trench; 30' long, 4' wide, 3' deep, alluvium, silica boulders (sinter?) on float, no outcrop. (TS/ML)
230	6-46	Pit; 15' long, 15' wide, 10' deep, bedrock exposure, limonite and hematite staining, bleached dump material with minor limonite and hematite, possible sample locality. (TS/ML)
232	6-50	Pit; 8' long, 8' wide, 2' deep, alluvium, bleached dump material, hematite staining. (TS/ML)
233	7-1	Pit about 13' deep, 15' long, 15' wide in soil. (LV)
234	7-2	Pit about 18' deep, 6' long, 8' wide in ? mildly altered light gray volcanic rock. (LV) Sample 85 taken in this pit.1 due north of south end center Zeus 372. (LV)
235	7-3	Pit about 200' east of Cottonwood Canyon Road at saddle due south of Bodie. Two shallow pits side-by-side, larger--about 25' diameter, 6' deep, smaller--about 15' diameter, 3' deep, all soil. (LV)
236	3-16	Pit; 15' long, 15' wide, 8' deep, alluvium, no bedrock, limonite and hematite staining on dump, altered dacite. (TS/ML)
237	3-17	Pit; 15' long, 15' wide, 8' deep, alluvium, no bedrock, limonite and hematite staining on dump, altered dacite. (TS/ML)
238	3-10	Trench; 150' long, 20' wide, 6' deep, alluvium, no bedrock, covered with vegetation. (TS/ML)
239	2-26	Shaft, mostly caved 10' long, 10 less than 20' deep, hematite cemented breccia on dump--looks like talus in shaft. (LV)
240	2-25	Pit, 15' diameter, 4' deep, no exposure of bedrock. Iron stained hematite cemented breccia, secondary quartz. (LV)
241	2-2	Shallow shaft 6' long, 8' wide, 8' deep sunk in bedrock. Dump contains sulfides, also very bleached rock, filled with water. (LV)
242	2-3	Pit, 20' diameter, 5' deep, no bedrock, bleached bedrock on dump. (LV)
243	2-21	Trench in bedrock N45 W, 120' long, 8' wide, 4' deep, abundant green chlorite? and iron oxides, mildly bleached hematite cemented breccia, slickensides, minor chalcedony. (LV)
244	2-22	Trench N78 W, 100' long, 15' wide, 6-10' deep, may be old adit, bleached hematite cemented breccia, no quartz in dump. (LV)

Map ID	Field ID	Description
245	2-16	Trench about 75' long N50 E in intensely bleached rock not competent. Resembles talus of interlocking boulders. May be collapsed adits. (LV)
246	2-15	Trench 75' long @N85 E, bedrock not exposed. Dump contains bleached hematite cemented breccia, secondary quartz. May be collapsed adit. (LV)
247	2-13	Three shallow pits in highly bleached hematite cemented breccia: (LV) upper pit about 10' diameter, 2' deep middle looks like shaft 4' long, 4' wide, 4' deep lower 4' long, 4' wide, 1' deep
248	3-29	Pit; 15' long, 15' deep, wide, 8' deep, no bedrock but pit is entirely rock fragments, bleached, abundant limonite, highly altered, breccia fragments. (TS/ML)
249	2-10	Dozer trench--about 75' long, 10' wide, 10' deep, N40 E, no bedrock. (LV)
249	3-28	Trench; 75' long, 20' wide, 10' deep, alluvium, no bedrock. (TS/ML)
250	3-27	Pit; 5' long, 5' wide, 1' deep, alluvium, no bedrock, gray dump material. (TS/ML)
251	3-25	Pit; 6' long, 6' wide, 2' deep, alluvium, no bedrock, minor limonite. (TS/ML)
252	4-S21	Caved shaft, no outcrop. (GW)
253	6-60	Pit; 20' long, 20' wide, 10' deep, bleached and altered dump material, abundant limonite staining, may be a caved adit adjacent to the north in alluvium. (TS/ML)
254	4-74	Trench, 176' long, 20' wide, 8' deep, at top opening, 10' wide at base. Mud in base. Trench turns into narrow stream bed to the West, trends N45 W. (CS)
255	4-85	Pits, round, directly above Trench 84, 20' diameter, 5' deep, no rock exposures. (CS)
256	4-T9	Trench, 75' long dozer-made trench, no outcrop, 6' deep. Claim post, "Amarillo Location Mon.", south of trench, had documents in plastic vial for 1990. (GW)
257	4-P13	Pit, 10' long, 10' wide, 3' deep, 8' chalcedony, vein northeast /southwest, vertical. (GW)
258	4-P1	Pit, 15' long, 12 wide, 4' deep with chalcedony vein 8" wide, poorly exposed. (GW)
260	4-2T	Trench, 90' long, 6' wide, 4' deep, reddish brown porphyry with quartz or adularia veins in some rocks. All rock is in block fragments, no veins noticeable. Is at upper end of 2T, small hole either caved in stope or small trench, 12' diameter, 4' deep. (GW)
261	4-1T	Trench, 26' long, 12' wide, 3' deep. (GW)
262	4-1TA	Trench, perpendicular to 1T, 90' long, 18' wide, 2.5' deep. Rock type-reddish brown with adularia type mineralization. (milk white layers, thin red between) no significant vein structures or rocks, outcrops. Trenches appear to be filled in and revegetated. Would have to excavate to sample. (GW)
263	4-83	Trench 50' long, 20' wide, 3' deep revegetated, dacite rock fragments. (CS)
264	4-82	Trench 176' long, 4' deep, 10' wide. (CS)
266	4-3SH	Shaft fenced off-sounds like 90' long, about 2' wide at narrowest point, 100' deep. Quartz veins, 1-2" thick, trend N- S and dip 98 down. Vein appears to have been 2' wide. (GW)
267	4-50	Trench - 70' long, 10' wide, 10' deep, sample site on East wall (orange spray indicator) no sample number. Dacite, greenish clay, kaolinitic alteration wall trends N65 E. Pit to North side of trench and East side, both small, 20' diameter, 10' deep. (CS)
268	4-45	Three pits or one long trench with three distinct pits to it. (CS) Smallest trench on North end. 10' diameter, 10' deep. (CS) Middle pit - 20' depth with gray dacite and reddish veining through kaolinitic alteration. 20' diameter. Rock outcrops highly altered - no definable trend or dips. Breceiated dacite with greenish tint to it, small area. (CS) South end pit same size as middle one. No out crop exposure on end pits. (CS)

Map ID	Field ID	Description
269	4-57	Small trench, purple dacite with reddish also, some chalcedony veining, trends N70 E. (CS)
270	4-63	Small round trench, colluvium material - dacite, lighter and smaller fragments of dacite on east edge, 10' diameter slopes down to 2' diameter at 5' depth. (CS)
271	4-38	Pit, 20' long, 20' wide, open, gray dacite, loose rocks all around, no visible outcrops, directly below hill from 37, S80 E. (CS)
272	4-37	Trench, open, 120' long, 10' wide, caved in, could be two shafts in gray dacite, no outcrop visible. N15 E. (CS)
273	4-5T	Trench, west of 1SH. 30' long, 5' wide, 4' deep, no veins observed. (GW)
274	4-1SH	Shaft at peak of Standard Hill near Sample #17. Reddish porphyry rock with 6" quartz vein, unstable shaft, no beams. (GW)
275	4-7T	Pit, south of 6T, square pit 40' long, 40' wide, 10' deep, no observable veins, stack of adularia type minerals in west side, partially filled pit with rock. Sample #31 may have been collected here. (GW)
276	4-2SH	Shaft with collapsed timbers and lift equipment at top, about 40' deep. 6" wide quartz vein on south side, trend is N- S, dip 95 straight down. (GW)
277	4-71	Trench 165' long, 10' wide, 6' deep, curves slightly around debris slope at base of ore cart tram for adits above (#33), trends N50 W. (CS)
278	4-72	Trench 56' long, 6' wide, 2' deep, trends N85 W. (CS)
279	4-75	Trench 88' long, 20' wide, 8' deep, trends N83 E. (CS)
280	4-76	Trench, same size and trend as Trench 75, is due South of 75. (CS)
281	5-80	Trench, same as 79. (CS)
282	5-79	Trench, same as 78 only 1' depth, 5' wide, same trend and length. (CS)
283	2-32	Caved shaft--25' diameter, 15' deep bleached hematite cemented breccia on dump. (LV)
284	2-23	Pit, at base of cliff about 100' east of sample site 67, 115' long, 15' wide, about 3' of cliff face from floor has been prospected, hematite cemented breccia-quartz on dump. On west side of prospect, a narrow cut about 3' wide continues up a long iron oxide stained fracture 120', N16 E. Bed rock contains sparse quartz veinlets, the veinlets <1". (LV)
285	2-14	At Sample 60 site hole sunk in, outcrop 4' long, 10' wide, minor quartz vein, secondary quartz in fractures, iron oxide stained. (LV)
286	7-22	Pit--15' long, 10' wide, 2' deep, in light gray-feldspars altered to clay. (LV)
287	7-15B	Trench--100' long, 3' wide, 2' deep upslope in fresh rock with abundant hornblende and feldspar, downslope is yellowish-clayey material. (LV)
289	6-45	Pit; 15' long, 15' wide, 8' deep, bedrock exposure, limonite and hematite staining, dump material very bleached with minor hematite and limonite. (SAMPLE 87) (TS/ML)
290	6-44	Caved shaft; abundant dump material, bleached, minor limonite, no distinct working, no outcrop, small pits and diggings around periphery of dump material. (TS/ML)
291	6-32	Trench; 50' long, 10' wide, 5' deep, alluvium, no outcrop. (TS/ML)
292	6-37	Pit; 15' long, 10' wide, 5' deep, alluvium, no outcrop, minor limonite and hematite. (TS/ML)
293	6-38	Pit; 13' long, 13' wide, 4' deep, alluvium, no outcrop, minor limonite and hematite. (TS/ML)
294	6-1	Trench; about 100' long, 6' wide, 4' deep; alluvium, no bedrock exposed. (TS/ML)
295	6-2	Trench; 50' long, 12' wide, 4; alluvium, no bedrock outcrop. (TS/ML)

Map ID	Field ID	Description
296	6-12	Surface scrape; 2 - 3 feet deep, dump material is white, bleached and altered, minor hematite staining. (TS/ML)
297	6-15	Adit; unknown size, portal in alluvium, trenching adjacent to adit, no outcrop. (TS/ML)
298	6-14	Surface scrape; 40' long, 20' wide, 2' deep, alluvium, very bleached and altered float material, minor limonite, no outcrop. (TS/ML)
299	4-S28	Caved shaft, no outcrop. (GW)
300	4-P4	Pit, 15' long, 15 wide, north side covered over with much from S-2. (GW)
301	4-P6	Pit, 15' long, 15 wide, 3' deep, no outcrop. (GW)
302	4-P9	Pit, 30' long, 20' wide, 10' deep, gray dacite with black manganese-iron staining and chalcedony. Veins up to 1 1/2" wide with one yellow-white vein 4" wide on west wall of pit. (GW)
303	4-S25	Open stope with much timber, unsafe, 10' long, 20' opening. (GW)
304	4-4T	Trench, up slope of Sample #22, 20' long, 4' wide, 6' deep, reddish brown porphyry rock matrix, quartz vein, partially left in place about 4" wide. E90 , trend NW. Second vein, 2" wide, trend NE, dip 90 . (GW)
305	43T	Trench, 80' long, 4' wide, 6' deep, great trench, reddish brown porphyry with quartz vein 80' long approximately 5" wide appears to have been mined out--vein may have been 4' wide (adularia type vein) remnants of it on both sides of trench. Near Sample #20. (GW)
306	4-S16	Caved shaft, partly open stope 100' long, gray chalcedony vein 2' wide. (GW)
NA	4-T1	Trench, 50' long, 25' wide, soils only. (GW)
NA	4-91	Shaft? Filled in - 40' diameter, 20' deep, ore chute extends East from shaft. Map shows two shafts - only one found. (CS)
NA	4-T5	Trench system 170' long going WSW of south. There are several shorter trenches perpendicular to main trench 10- 20' long. Trenches are 2' deep. (GW)
NA	4-T3	Trench, As A1 100' soils. (GW)
NA	4-T4	Trench, 45' long, 2' deep, no outcrop. (GW)
NA	4-S1	Shaft, 20' deep, caved, soils only. (GW)
NA	5-78	Trench 64' long, 35' wide, 3' deep, trends N80 W. (CS)
NA	4-93	Trench, East of spring - apparently for drainage. Follows slope of hill, 50' long, south to north down the slope - 10' wide, 5' deep. (CS) East end of 93 - two mounds of worked rock - fine grained deposit - no large trenches near deposit either. (CS)
307	02	Excavation, 20 feet long, 20 feet wide, in stratified dacite, no vein visible.(GW)
308	03	Pit, 30 feet long, 20 feet wide, elongated north-south, no vein exposure, argillic dacite (GW).
309	05	Pit, 25 feet long, 25 feet wide, no vein or rock exposures.(GW)
310	06	
311	07	Circular pit, 45 feet long, 45 wide, 12 feet deep, no vein or rock exposure.(GW)
312	08	Drill site, small dump of argillic dacite, 25 feet long, 25 feet wide.(GW)
313	09	Collapsed shaft, 25 feet long, 25 feet wide, and dump, 40 feet long, 30 feet wide, 10 feet deep, no vein or rock exposure.(GW)
314	10	Pit, 20 feet long, 20 feet wide, 2 feet deep, no vein or rock exposure.(GW)
315	11	Drill site? white argillic dacite with flat area adjacent to it.(GW)
316	12	Pit, 15 feet long, 15 feet wide, 2 feet deep.(GW)
317	13	Shallow cut in dacite, no veins, possible house site.(GW)

Map ID	Field ID	Description
318	14	Drill site? white clay and rock fragments.(GW)
319	15	Uphill 50 feet from Point 14, pit, 20 feet long, 20 feet wide, 6 feet deep.(GW)
320	16	Pit, 5 feet long, 5 feet wide, 1 foot deep, no vein or rock exposure.(GW)
321	17	Pit, 7 feet long, 7 feet wide, 2 feet deep, across from Point 16.(GW)
322	18	Drill pad, 100 feet long, 30 feet wide.(GW)
323	19	Southernmost of 3 pits in a row, south of a large dump, 30 feet long, 30 feet, 8 feet deep.
324	20	Caved shaft, 60 feet long, 60 feet wide, with dump, 125 feet long, 150 feet wide, to west and south, dumps deposited in radial pattern around shaft, fractures at shaft N 10°E65°E, poorly mineralized with clay.(GW)
325	21	Pit, 40 feet long, 5 feet wide, 6 feet deep, in dacite on fracture N 20°E80°E.(GW)
326	23	Pit, 7 feet long, 7 feet wide, 4 feet deep.(GW)
327	24	Shaft, open, no vein exposed in argillic dacite.(GW)
328	25	Caved shaft, 15 feet long, 15 feet wide (south), pit, 20 feet long, 20 wide, 5 feet deep, not on air photo, no vein or rock exposures.(GW)
329	26	Pit with dump, 20 feet long, 20 feet wide, 6 feet deep, no vein or rock exposures.(GW)
330	27	285-foot long dozer cut, no vein or rock exposures.(GW)
331	28	Pit, 30 feet long, 30 feet wide, 4 feet deep, no vein or rock exposure.(GW)
332	29	Square shaft, 6 feet long, 4 feet wide, 10 feet deep, BLM sample? collected here.(GW)
333	30	Pit, 5 feet long, 5 feet wide, 2 feet deep, no vein or rock exposure.(GW)
334	31	Not on photo, trench, 75 feet long, 4 feet wide, 2 feet deep.(GW)
335	32	Pit, not on photo, 15 feet long, 10 feet wide, 3 feet deep, no vein or rock exposure.(GW)
336	33	Pit, 5 feet long, 5 feet wide, 3 feet deep, no vein or rock exposures.(GW)
337	34	Collapsed shallow shaft, 25 feet long, 30 feet wide, 9 feet deep.(GW)
338	35	West edge of collapsed adit, east edge of dump.(GW)
339	36	Pit above collapsed adit, 25 feet long, 25 feet wide, 6 feet deep, no vein or rock exposure.(GW)
340	37	Trench, 30 feet long to east, at west ends trench is a pit, 10 feet long, 10 feet wide, 4 feet deep.(GW)
341	38	Trench on side of hill, 25 feet long, 3 feet wide, 2 feet deep.(GW)
342	39	Trench, 10 feet long, 3 feet wide, 0 to 2 feet deep.(GW)
343	40	Pit, 10 feet long, 10 feet wide, 3 feet deep, no vein or rock exposure.(GW)
344	41	Midway between two pits, north pit, 10 feet long, 10 feet wide, 3 feet deep, south pit, 10 feet long, 10 feet wide, 4 feet deep, no vein exposure, dacite.(GW)
345	42	Collapsed shaft, now pit, 15 feet wide, 15 feet wide, 4 feet deep, north wall of pit exposes zone of altered dacite 8 to 10 inches wide without quartz veins.(GW)
346	43	Tuff outcrop.(GW)
347	44	Trench and dump, trench is 75 feet long, 5 feet wide, 2 to 3 feet deep, no vein or rock exposure, location at top of dump.(GW)
348	45	Pit and dump, 10 feet long, 6 feet wide, 3 feet deep, no vein or rock exposure.(GW)
349	46	Pit, 6 feet long, 6 feet wide, 1 foot deep.(GW)

Map ID	Field ID	Description
350	47	This site has a 150-foot long cut in the hillside adjacent (west) of a creek. There is a caved adit at north end of cut. There is a muck pile 120 feet long with abundant quartz fragments and hydrothermally altered dacite, white/grey clay predominate. Some iron track suggests that this was an adit 200-300 feet long. On the east side of the creek, opposite the muck pile are the remains of a road. This could have been a mill site. Water could have been dammed at this creek, but there is no evidence of a dam on the east side of the creek. Sample WR-7-1 and WRMD taken from muck pile. WRMD was collected by William Boynton. The WRMD consisted of quartz with sulfides, fine, gray-black in quartz, "Ruby silvers". The muck pile has a volume of 184,000 cubic feet.(GW)
351	48	Pit, 7 feet long, 5 feet wide, 3 feet deep, about 100 feet uphill from Point 41, dacite, no vein.(GW)
352	49	Pit, 10 feet long, 5 feet wide, 2 feet deep, no vein or rock exposure.(GW)
353	50	Collapsed shaft and dump, now pit, 20 feet long, 20 feet wide, 7 feet deep, on west side of pit is an exposure of altered dacite, 14 inches wide. Sample WR-7W-2 taken here..
354	51	Pit and dump, 15 feet long, 15 feet wide, 4 feet deep, no vein or rock exposures.(GW)
355	52	Collapsed adit or trench, 50 feet long, 8 feet wide, 0-12 feet deep, no vein or rock exposures.(GW)
356	53	Collapsed shaft, now pit, 15 long, 10 feet wide, 7 feet deep, no vein or rock exposure.(GW)
357	54	Collapsed adit or trench, 70 feet long, 7 feet wide, 0-7 feet deep, no vein or rock exposure, hematite dacite in dump.(GW)
358	55	Pit, 12 feet long, 12 feet wide, 4 feet deep, no vein or rock exposure.(GW)
359	56	Tailings pond, 60 feet long, 40 feet wide, 4 feet deep.(GW)
360	57	Pit with other small excavations around it, pit, 20 feet long, 20 feet wide, 3 feet deep, out building to north of pit, spring east of pit.(GW)
361	58	Dump and pit, 10 feet long, 10 feet wide, 3 feet deep, north edge of dump has "speckled" quartz with sulfides. As per William Boynton, 0.2 oz. Au per ton, 20 oz. Ag per ton.
362	59	Trench or collapsed adit, 75 feet long, 0-10 feet deep, adit bends to north at east end, possible second adit or dozer cut. At west end of trench is an abandoned cabin, "Sleepy's Cabin", 1920's, 15 feet north of cabin are log posts, site of old shaft as per William Boynton.(GW)
363	60	Trench and dump, 70 feet long, 10 feet wide, 0-4 feet deep, no vein or rock exposure.(GW)
364	61	Trench and dump, 75 feet long, 5 feet wide, 0 to 3 feet deep.(GW)
365	62	Caved adit, now trench, 40 feet long with large dump.(GW)
366	63	Drill site on dump.(GW)
367	64	30 yards north of Point 63, collapsed shaft, now pit, 25 feet long, 25 feet wide, 6 feet deep.(GW)
368	65	Collapsed shaft with large dump, 50 feet long, 50 feet wide, 25 feet deep, no vein or rock exposures. There is a R.R. haul dump 90 feet long north of the pit. Most of the dump is east of the pit. There is a remnant of an older, partly buried pit or adit on the southeast edge of the dump.(GW)
369	66	Pit, 10 feet long, 10 feet wide, 3 feet deep, no vein exposures, fresh dacite.(GW)
370	67	Trench and dump, 50 feet long, 5 feet wide, 0 to 2 feet deep, no vein or rock exposure.(GW)

Map ID	Field ID	Description
371	68	Collapsed shaft now pit, 15 feet long, 15 feet wide, 4 feet deep, no vein exposure, only grey dacite.
372	69	Pit in hillside, 15 feet long, 4 feet wide, 0 to 4 feet deep, argillized dacite with hematite straining on some fractures.(GW)
373	70	Pit, 6 feet long, 4 feet wide, 1-foot deep, weakly argillic dacite.(GW)
374	71	Open adit in dacite flow breccia, no veins. 4 feet x 4 feet and 3 to 10 feet deep.(GW)
375	01	Claim marker.
376	04	Claim marker.

APPENDIX 11A:

GOLD AND SILVER ASSAYS

APPENDIX 11A. GOLD AND SILVER ASSAYS

BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
1		SHC-01		487		0.014		14.7	0.4263	BLM
2		SHC-02		2801		0.081		22.5	0.65	BLM
3		SHC-03		1582		0.046		6.5	0.19	BLM
4		SHC-04		175		0.005		5.5	0.16	BLM
5		SHC-05		711		0.021		10.3	0.30	BLM
6		SHC-06		100		0.003		4.1	0.12	BLM
7		SHC-07		873		0.025		7.4	0.21	BLM
8		SHC-08		136		0.004		4.3	0.12	BLM
9		SHC-09		6983		0.203		33.7	0.98	BLM
10		SHC-10		349		0.010		5.3	0.15	BLM
11		SHC-11		6684		0.194		9.9	0.29	BLM
12		SHC-12		>10000		0.313		11.2	0.32	BLM
13		SHC-13		538		0.016		2.1	0.06	BLM
14		SHC-14		678		0.020		3.7	0.11	BLM
15		SHC-15		246		0.007		5.1	0.15	BLM
16		SHC-16		243		0.007		4.8	0.14	BLM
17		SHC-17		1812		0.053		9.2	0.27	BLM
18		SHC-18		341		0.010		2.9	0.08	BLM
19		SHC-19		460		0.013		2.2	0.06	BLM
20		SHC-20		1260		0.037		10.0	0.29	BLM
21		SHC-21		2442		0.071		173.2	5.02	BLM
22		SHC-22		1718		0.050		11.7	0.34	BLM
23		SHC-23		436		0.013		18.9	0.55	BLM
24		SHC-24		1162		0.034		2.7	0.08	BLM
25		SHC-25		165		0.005		1.4	0.04	BLM
26		SHC-26		1238		0.036		8.2	0.24	BLM
27		SHC-27		4252		0.123		27.9	0.81	BLM
28		SHC-28		200		0.006		1.5	0.04	BLM
29		SHC-29		>10000		0.336		42.8	1.24	BLM
30		SHC-30		760		0.022		2.7	0.08	BLM
31		SHC-31		125		0.004		1.5	0.04	BLM
32		SHC-32		86		0.002		12.3	0.36	BLM
33		SHC-33		329		0.010		12.7	0.37	BLM
34		SHC-34		1641		0.048		17.9	0.52	BLM
35		SHC-35		4864		0.141		23.4	0.68	BLM
36		SHC-36		336		0.010		13.3	0.39	BLM
37		SHC-37		962		0.028		8.8	0.26	BLM
38		SHC-38								BLM
39		SHC-39		73		0.002		0.7	0.02	BLM
40		SHC-40		67		0.002		0.4	0.01	BLM
41		SHC-41		2975		0.086		16.3	0.47	BLM
42		SHC-42		2466		0.072		16.0	0.46	BLM
43		SHC-43		404		0.012		5.8	0.17	BLM
44		SHC-44		8431		0.244		43.6	1.26	BLM
45		SHC-45		414		0.012		4.5	0.13	BLM
46		SHC-46		182		0.005		1.5	0.04	BLM
47		SHC-47		75		0.002		0.7	0.02	BLM
48		SHC-48		1802		0.052		3.5	0.10	BLM
49		SHC-49		1106		0.032		8.9	0.26	BLM
50		SHC-50		1523		0.044		11.2	0.32	BLM
51		SHC-51		978		0.028		6.7	0.19	BLM
52		SHC-52		194		0.006		1.4	0.04	BLM
53		SHC-53		78		0.002		0.6	0.02	BLM
54		SHC-54		5366		0.156		24.5	0.71	BLM
55		SHC-55		>10000		0.561		40.1	1.16	BLM
56		SHC-56		79		0.002		0.7	0.02	BLM
57		SHC-57		23		0.001		0.2	0.01	BLM
58		SHC-58		75		0.002		0.5	0.01	BLM
59		SHC-59		149		0.004		0.9	0.03	BLM

APPENDIX 11A. GOLD AND SILVER ASSAYS										
BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
60		SHC-60		985		0.028		8.7	0.25	BLM
61		SHC-61		239		0.007		0.3	0.01	BLM
62		SHC-62		25		0.001		0.4	0.01	BLM
63		SHC-63		31		0.001		1.3	0.04	BLM
64		SHC-64		21		0.001		<.2	#NUM!	BLM
65		SHC-65		39		0.001		0.3	0.01	BLM
66		SHC-66		25		0.001		0.2	0.01	BLM
67		SHC-67		372		0.011		5.7	0.17	BLM
68		SHC-68		44		0.001		0.3	0.01	BLM
69		SHC-69		67		0.002		0.4	0.01	BLM
70		SHC-70		36		0.001			#NUM!	BLM
71		SHC-71		12		0.000		<.2	#NUM!	BLM
72		SHC-72		9		0.000		<.2	#NUM!	BLM
73		SHC-73		6		0.000		<.2	#NUM!	BLM
74		SHC-74		52		0.002		1.6	0.05	BLM
75		SHC-75		9		0.000		<.2	#NUM!	BLM
76		SHC-76		29		0.001		0.8	0.02	BLM
77		SHC-77		47		0.001		10.3	0.30	BLM
78		SHC-78		602		0.017		3.5	0.10	BLM
79		SHC-79		52		0.002		0.7	0.02	BLM
80		SHC-80		10		0.000		<.2	#NUM!	BLM
81		SHC-81		121		0.004		5.4	0.16	BLM
82		SHC-82		41		0.001		<.2	#NUM!	BLM
83		SHC-83		444		0.013		6.7	0.19	BLM
84		SHC-84		90		0.003		1.6	0.05	BLM
85		SHC-85		7		0.000		<.2	#NUM!	BLM
86		SHC-86		119		0.003		1.2	0.03	BLM
87		SHC-87		20		0.001		0.9	0.03	BLM
88		SHC-88		18		0.000		0.3	0.01	BLM
89		SHC-89		29		0.001		0.9	0.03	BLM
90		SHC-90		66		0.002		2.3	0.07	BLM
91		SHHG-1		2843		0.082		4.7	0.14	BLM
300		FS-001	UDG		0.030	0.001		0.9	0.03	HERRERA
301		FS-002	UBZ		0.020	0.001		0.5	0.01	HERRERA
302		FS-002SD	UBZ		0.020	0.001		0.7	0.02	HERRERA
303		FS-003	SBAF		0.020	0.001		0.0	0.00	HERRERA
304		FS-003X	ABSF		0.020	0.001		0.1	0.00	HERRERA
305		FS-004	SLCJ		0.050	0.001		0.1	0.00	HERRERA
306		FS-005	SLAF		0.020	0.001		0.2	0.00	HERRERA
307		FS-006	SLPA		0.020	0.001		0.0	0.00	HERRERA
308		FS-006SC	SLA		0.020	0.001		0.0	0.00	HERRERA
309		FS-007M	JNYA		0.020	0.001		0.5	0.01	HERRERA
310		FS-007D	HDAF		0.020	0.001		0.5	0.01	HERRERA
311		FS-008	HDQ		0.030	0.001		0.5	0.01	HERRERA
312		FS-009V	V-F		0.300	0.009		0.6	0.02	HERRERA
313		FS-009D	HDAO		0.030	0.001		0.6	0.02	HERRERA
314		FS-010	V-QF		0.200	0.006		0.8	0.02	HERRERA
315		FS-0IIH	V-JF		0.300	0.009		0.9	0.02	HERRERA
316		FS-011V	VWPA		0.500	0.015		2.7	0.08	HERRERA
317		FS-012	KWTH		0.030	0.001		0.8	0.02	HERRERA
318		FS-012SD	KWTH		0.050	0.001		1.0	0.03	HERRERA
319		FS-013	HDAF		0.030	0.001		0.1	0.00	HERRERA
320		FS 013DX	VDCE		0.100	0.003		0.8	0.02	HERRERA
321		FS-014	VWHA		0.400	0.012		1.9	0.06	HERRERA
322		FS-015	VWHA		0.200	0.006		1.2	0.03	HERRERA
323		FS-016	V-JR		0.450	0.013		0.3	0.01	HERRERA
324		FS-017	HBEA		0.020	0.001		0.1	0.00	HERRERA
325		FS-018HR	HDQA		0.030	0.001		0.6	0.02	HERRERA
326		FS-018BX	HBVA		0.500	0.015		0.9	0.03	HERRERA

APPENDIX 11A. GOLD AND SILVER ASSAYS

BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
327		FS-019	HBAJ		0.020	0.001		0.7	0.02	HERRERA
328		FS-020	HBAJ		0.020	0.001		0.1	0.00	HERRERA
329		FS-021	HOIA		0.020	0.001		0.5	0.01	HERRERA
330		FS-022	V-JR		2.600	0.076		2.3	0.07	HERRERA
331		FS-023	KWTH		0.050	0.001		0.6	0.02	HERRERA
332		FS-023B	HDAF		0.020	0.001		0.5	0.01	HERRERA
333		FS-024X	HWYF		0.020	0.001		0.2	0.00	HERRERA
334		FS-025	KWTH		0.030	0.001		0.7	0.02	HERRERA
335		FS-026	HBTA		0.020	0.001		0.8	0.02	HERRERA
336		FS-026SD	HBTA		0.020	0.001		0.8	0.02	HERRERA
337		FS-027	V-PQ		2.500	0.073		8.5	0.25	HERRERA
338		FS-028	HBAY		0.020	0.001		1.0	0.03	HERRERA
339		FS-029	HWAI		0.050	0.001		0.7	0.02	HERRERA
340		FS-030	HBEY		0.030	0.001		0.3	0.01	HERRERA
341		FS-030HV	lpe		0.750	0.022		6.9	0.20	HERRERA
342		FS-030X	HBAY		0.020	0.001		10.0	0.29	HERRERA
343		FS-031	HBCA		0.020	0.001		0.2	0.00	HERRERA
344		FS-032	HBCA		0.020	0.001		0.6	0.02	HERRERA
345		FS-033	HDIA		0.030	0.001		0.6	0.02	HERRERA
346		FS-034	V-R		1.000	0.029		3.0	0.09	HERRERA
347		FS-035	VWJF		2.200	0.064		29.5	0.86	HERRERA
348		FS-036	VWQF		2.600	0.076		2.2	0.06	HERRERA
349		FS-037	HWAF		0.030	0.001		0.7	0.02	HERRERA
350		FS-038	HBEC		0.020	0.001		0.1	0.00	HERRERA
351		FS-038AC	HDEQ		0.020	0.001		0.0	0.00	HERRERA
352		FS-039	HBEA		0.020	0.001		0.0	0.00	HERRERA
353		FS-040	ABHF		0.030	0.001		0.7	0.02	HERRERA
354		FS-040SD	ABHI		0.150	0.004		11.0	0.32	HERRERA
355		FS-041	HDAI		0.050	0.001		0.1	0.00	HERRERA
356		FS-042M	HNJ		0.020	0.001		0.0	0.00	HERRERA
357		FS-042B	HBIA		0.020	0.001		0.1	0.00	HERRERA
358		FS-043	V-F		1.500	0.044		3.4	0.10	HERRERA
359		FS-044D	HDAF		0.020	0.001		0.6	0.02	HERRERA
360		FS-044E	HBAF		0.020	0.001		0.7	0.02	HERRERA
361		FS-045	HDA		0.020	0.001		0.5	0.01	HERRERA
362		FS-046	HBY		0.020	0.001		0.4	0.01	HERRERA
363		FS-047X	HDY		0.020	0.001		0.1	0.00	HERRERA
364		FS-047D	HDY		0.020	0.001		0.5	0.01	HERRERA
365		FS-048FW	HBAY		0.030	0.001		0.3	0.01	HERRERA
366		FS-048HW	HBAF		0.020	0.001		0.3	0.01	HERRERA
367		FS-048V	VWAF		0.030	0.001		0.1	0.00	HERRERA
368		FS-049	HBCF		0.030	0.001		0.5	0.01	HERRERA
369		FS-050	ABYF		0.020	0.001		0.8	0.02	HERRERA
370		FS-051x	ABYF		0.020	0.001		0.5	0.01	HERRERA
371		FS-051SD	ADYF		0.020	0.001		0.5	0.01	HERRERA
372		FS-052	V-F		1.800	0.052		7.0	0.20	HERRERA
373		FS-053	VWFY		0.550	0.016		4.0	0.12	HERRERA
374		FS-054	V-F		0.500	0.015		11.7	0.34	HERRERA
375		FS-055	VWYA		3.100	0.090		33.0	0.96	HERRERA
376		FS-056	V-PF		3.500	0.102		49.0	1.42	HERRERA
377		FS-057	VWPI		21.000	0.609		230.0	6.67	HERRERA
378		FS-058	VWKF		1.500	0.044		5.7	0.17	HERRERA
379		FS-059	KBAI		0.030	0.001		0.6	0.02	HERRERA
380		FS-060	V-F		14.500	0.421		45.0	1.31	HERRERA
381		FS-061	KBTI		0.020	0.001		1.8	0.05	HERRERA
382		FS-062	KWTA		0.050	0.001		3.5	0.10	HERRERA
383		FS-063	V-F		7.600	0.220		00.0	1.74	HERRERA
384		FS-064	KWTF		0.020	0.001		1.1	0.03	HERRERA
385		FS-065	KBQI		0.020	0.001		0.8	0.02	HERRERA

APPENDIX 11A. GOLD AND SILVER ASSAYS

BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
386		FS-066	KDQI		0.030	0.001		0.6	0.02	HERRERA
387		FS-067	KBMI		0.020	0.001		0.8	0.02	HERRERA
388		FS-068	V-F		4.700	0.136		26.5	0.77	HERRERA
389		FS-069	ABKX		0.020	0.001		0.2	0.01	HERRERA
390		FS-070	KWAJ		0.200	0.006		1.1	0.03	HERRERA
391		FS-071	V-F		0.100	0.003		4.2	0.12	HERRERA
392		FS-072	KDIF		0.030	0.001		0.7	0.02	HERRERA
393		FS-073	KBQA		0.020	0.001		0.7	0.02	HERRERA
394		FS-074	V-PF		11.000	0.319		85.5	2.48	HERRERA
395		FS-075	KWAI		0.100	0.003		3.1	0.09	HERRERA
396		FS-076	V-F		7.400	0.215		48.5	1.41	HERRERA
397		FS-077	KBAX		0.020	0.001		0.9	0.03	HERRERA
398		FS-078	VWF		2.400	0.070		20.5	0.59	HERRERA
399		FS-079	VWF		2.000	0.058		14.0	0.41	HERRERA
400		FS-080	V-F		1.500	0.044		12.0	0.35	HERRERA
401		FS 081	V-PF		10.500	0.305		10.7	0.31	HERRERA
402		FS-082	KWBI		0.100	0.003		23.0	0.67	HERRERA
403		FS-083	KBCY		0.100	0.003		2.3	0.07	HERRERA
404		FS-084	KBCY		0.020	0.001		0.6	0.02	HERRERA
405		FS-084SD	KBCY		0.150	0.004		1.2	0.03	HERRERA
406		FS-085	KBFY		0.100	0.003		1.2	0.03	HERRERA
407		FS-086	KWBF		5.800	0.168		12.7	0.37	HERRERA
408		FS-087	KDIQ		0.020	0.001		0.5	0.01	HERRERA
409		FS-088	KDTI		0.050	0.001		1.6	0.05	HERRERA
410		FS-088SD	KDTI		0.150	0.004		3.0	0.09	HERRERA
411		FS 089	KBYI		0.100	0.003		0.8	0.02	HERRERA
412		FS-090	KWBA		2.100	0.061		67.0	1.94	HERRERA
413		FS-091B	KBYA		0.050	0.001		1.3	0.04	HERRERA
414		FS-091D	KDYA		0.030	0.001		0.9	0.03	HERRERA
415		FS-092	KDIG		0.030	0.001		0.6	0.02	HERRERA
416		FS-093	KWIG		0.150	0.004		28.0	0.81	HERRERA
417		FS-094	KDIG		0.020	0.001		0.7	0.02	HERRERA
418		FS-095	KDIG		0.030	0.001		0.6	0.02	HERRERA
419		FS-096	KDTA		0.020	0.001		0.6	0.02	HERRERA
420		FS-097	KDT		0.020	0.001		0.9	0.03	HERRERA
421		FS-098	KDTG		1.900	0.055		7.8	0.23	HERRERA
422		FS-098V	V-F		3.300	0.096		2.0	0.06	HERRERA
423		FS-099	KDTF		0.030	0.001		0.9	0.03	HERRERA
424		FS-100	V-F		40.000	1.160		72.0	2.09	HERRERA
425		FS 101	KDIT		0.030	0.001		0.6	0.02	HERRERA
426		FS-102	KDTI		0.020	0.001		1.4	0.04	HERRERA
427		FS-103	KBTQ		0.050	0.001		0.8	0.02	HERRERA
428		FS-104	KBTM		0.020	0.001		1.0	0.03	HERRERA
429		FS-105	KDTV		0.550	0.016		1.4	0.04	HERRERA
430		FS-106	KDTV		0.020	0.001		0.6	0.02	HERRERA
431		FS-107	KDTG		0.020	0.001		0.6	0.02	HERRERA
432		FS-107SD	KDTG		0.020	0.001		0.7	0.02	HERRERA
433		FS-108	VWF		12.000	0.348		62.0	1.80	HERRERA
434		FS-109	KDTI		0.020	0.001		0.7	0.02	HERRERA
435		FS-110	KDYG		0.030	0.001		0.9	0.02	HERRERA
436		FS-111	KBYG		0.050	0.001		0.7	0.02	HERRERA
437		FS-112	V-FM		0.200	0.006		72.0	2.09	HERRERA
438		FS-113	KWTG		0.200	0.006		9.4	0.27	HERRERA
439		FS-114	KDTQ		0.150	0.004		0.6	0.02	HERRERA
440		FS-115	KDYF		0.030	0.001		0.9	0.02	HERRERA
441		FS-116V	V-M		3.800	0.110		8.5	0.25	HERRERA
442		FS 116H	KDMY		0.250	0.007		4.2	0.12	HERRERA
443		FS-117A	V-P		28.500	0.827		73.0	2.12	HERRERA
444		FS-117C	V-F		10.500	0.305		42.0	1.22	HERRERA

APPENDIX 11A GOLD AND SILVER ASSAYS										
BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
445		FS 118	VWF		10.300	0.299		3.2	0.09	HERRERA
446		FS-119	KWBF		0.150	0.004		0.7	0.02	HERRERA
447		FS-120	KDYI		0.030	0.001		5.5	0.16	HERRERA
448		FS-120X	KDYF		0.050	0.001		2.5	0.07	HERRERA
449		FS-121	VWFA		1.400	0.041		10.8	0.31	HERRERA
450		FS-122	KDTG		0.020	0.001		0.8	0.02	HERRERA
451		FS-122X	KDTF		0.030	0.001		0.8	0.02	HERRERA
452		FS-123	KDYF		0.050	0.001		1.8	0.05	HERRERA
453		FS-124	KDTG		0.100	0.003		1.1	0.03	HERRERA
454		FS-125	KDTF		35.000	1.015		3.0	0.09	HERRERA
455		FS-126	KDTF		0.030	0.001		1.0	0.03	HERRERA
456		FS-127	KBYC		0.020	0.001		1.0	0.03	HERRERA
457		FS-128B	KBAF		0.020	0.001		0.5	0.01	HERRERA
458		FS-128	KDAX		0.020	0.001		0.3	0.01	HERRERA
459		FS-129	KBAF		0.020	0.001		1.3	0.04	HERRERA
460		FS-130	KDXF		0.050	0.001		0.4	0.01	HERRERA
461		FS-130x	KDAF		0.020	0.001		0.3	0.01	HERRERA
462		FS-130Y	KLAF		0.020	0.001		0.9	0.03	HERRERA
463		FS-131	SLPF		0.020	0.001		1.8	0.05	HERRERA
464		FS-132	SBIA		0.050	0.001		6.4	0.19	HERRERA
465		FS-133	SLAF		0.020	0.001		0.1	0.00	HERRERA
466		FS-134	SLAF		0.020	0.001		0.1	0.00	HERRERA
467		FS-135	VLSA		0.350	0.010		4.0	0.12	HERRERA
468		FS-136	SLVQ		0.300	0.009		0.0	0.00	HERRERA
469		FS-137	SLAF		0.020	0.001		0.1	0.00	HERRERA
470		FS-138	SLPF		0.020	0.001		0.2	0.01	HERRERA
471		FS-139	SLPQ		0.020	0.001		0.0	0.00	HERRERA
472		FS-140	SBJV		0.050	0.001		0.7	0.02	HERRERA
473		FS-141	V-SF		9.300	0.270		42.0	1.22	HERRERA
474		FS-142	ADKS		0.050	0.001		0.3	0.01	HERRERA
475		FS-143	SDAF		0.020	0.001		0.4	0.01	HERRERA
476		FS-144	KDIA		0.020	0.001		0.9	0.03	HERRERA
477		FS-145	KDI		0.020	0.001		0.7	0.02	HERRERA
478		FS-146	KDI		0.020	0.001		0.7	0.02	HERRERA
479		FS-147	KDIA		0.030	0.001		0.7	0.02	HERRERA
480		FS-148	KDIY		0.020	0.001		0.5	0.01	HERRERA
481		FS-149	KDTI		0.020	0.001		0.6	0.02	HERRERA
482		FS-151	KBYA		0.050	0.001		7.7	0.22	HERRERA
483		FS-152	KDYA		0.020	0.001		1.7	0.05	HERRERA
484		FS-153	V-F		8.200	0.238		100.0	2.90	HERRERA
485						0.000			0.00	HERRERA
486						0.000			0.00	HERRERA
487						0.000			0.00	HERRERA
488		EBBAX01	ABSI		0.050	0.001		1.5	0.04	HERRERA
489		EBBAX02	KBAF		0.050	0.001		1.0	0.03	HERRERA
490		EBBAX03	KBAF		0.020	0.001		5.0	0.15	HERRERA
491		EBBAX04	HBQA		0.020	0.001		0.5	0.01	HERRERA
492		EBBAX5M	HJNR		0.020	0.001		0.4	0.01	HERRERA
493		EBBAX5H	HDQA		0.020	0.001		0.5	0.01	HERRERA
494		EBBAX06	HBCE		0.020	0.001		0.2	0.01	HERRERA
495		EBBAX07	AWYI		0.250	0.007		2.0	0.06	HERRERA
496		EBBAX08	ADKF		0.200	0.006		2.0	0.06	HERRERA
497		EBBAX9V	V-F		0.350	0.010		50.0	1.45	HERRERA
498		EBBAX9W	KBAY		0.050	0.001		20.0	0.58	HERRERA
499		EBBAX9B	KBAY		0.500	0.015		7.0	0.20	HERRERA
500		EBBAX10	KDTF		0.050	0.001		0.5	0.01	HERRERA
501		EBBAX11	SLA		0.020	0.001		0.2	0.01	HERRERA
502		EBBAX12	SLAP		0.050	0.001		1.0	0.03	HERRERA
503		EBBAX13B	SLP		0.020	0.001		0.2	0.01	HERRERA

APPENDIX 11A. GOLD AND SILVER ASSAYS										
BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
504		EBBAX13C	KBSF		0.030	0.001		1.0	0.03	HERRERA
505		EBBAX14	KBTM		0.020	0.001		0.2	0.01	HERRERA
506		EBBAX15A	VWAF		0.600	0.017		20.0	0.58	HERRERA
507		EBBAX15B	AWYF		0.050	0.001		2.0	0.06	HERRERA
508		EBBAX15C	AWYF		0.050	0.001		2.0	0.06	HERRERA
509		EBBAX16V	V-F		1.400	0.041		30.0	0.87	HERRERA
510		EBBAX16H	KBTNI		0.150	0.004		5.0	0.15	HERRERA
511		EBBAX16F	KBYM		0.020	0.001		5.0	0.15	HERRERA
512		EBBAX17	KDTF		0.030	0.001		1.0	0.03	HERRERA
513		EBBAX18A	ADKF		0.050	0.001		2.0	0.06	HERRERA
514		EBBAX18B	ADKF		0.050	0.001		2.0	0.06	HERRERA
515		EBBAX19A	VBAS		0.020	0.001		2.0	0.06	HERRERA
516		EBBAX19B	VBAS		0.020	0.001		0.7	0.02	HERRERA
517		EBBAX20	KBIT		0.020	0.001		0.4	0.01	HERRERA
518		EBBAX21A	KBMY		0.050	0.001		2.0	0.06	HERRERA
519		EBBAX21B	VBM		3.900	0.113		30.0	0.87	HERRERA
520		EBBAX22	VWYIA		0.200	0.006		10.0	0.29	HERRERA
521		EBBAX23C	HBNAF		0.020	0.001		0.7	0.02	HERRERA
522		EBBAX24	HBNAF		0.020	0.001		0.2	0.01	HERRERA
523		EBBAX25	HDEQ		0.020	0.001		0.2	0.01	HERRERA
524		BB 7A	V-P		2.700	0.078		100.0	2.90	HERRERA
525		BCC1FW	KDIPY		0.100	0.003		8.2	0.24	HERRERA
526		BCC1HW	KDIY		0.200	0.006		0.2	0.00	HERRERA
527		BCC1V	VWFM		0.150	0.004		2.7	0.08	HERRERA
528		BCC2HW	KDPFY		0.250	0.007		22.8	0.66	HERRERA
529		BCC2V	V-Z		4.800	0.139		7.0	0.20	HERRERA
530		BCC3FW	KDPIY		0.200	0.006		1.9	0.06	HERRERA
531		BCC3HW	KDIY		0.020	0.001		0.0	0.00	HERRERA
532		BCC3V	V-ZF		2.900	0.084		7.0	0.20	HERRERA
533		BCC4HW	KDIYF		0.050	0.001		0.9	0.03	HERRERA
534		BCC4V	V-F		1.000	0.029		2.0	0.06	HERRERA
535		BCC5FW	KDYFI		0.100	0.003		5.2	0.15	HERRERA
536		BCC5HW	KDPF		0.300	0.009		30.4	0.88	HERRERA
537		BCC5V	V-RF		11.300	0.328		12.7	0.37	HERRERA
538		BCC6HW	KBYIP		0.050	0.001		2.8	0.08	HERRERA
539		BCC6V	V-F		0.500	0.015		0.5	0.01	HERRERA
540		BCC7HW	KDYIF		0.750	0.022		1.0	0.03	HERRERA
541		BCC7V	V-F		0.300	0.009		0.8	0.02	HERRERA
542		BCC8HW	KBYIF		0.020	0.001		0.1	0.00	HERRERA
543		BCC8V	V-F		0.200	0.006		0.0	0.00	HERRERA
544						0.000			0.00	HERRERA
545						0.000			0.00	HERRERA
546						0.000			0.00	HERRERA
547		BCC9HW	KDYIP		0.300	0.009		1.3	0.04	HERRERA
548		BCC9V	V-F		0.050	0.001		1.2	0.03	HERRERA
549		BCC10HW	KBIY		0.020	0.001		7.0	0.20	HERRERA
550		BCC10V	V-FM		0.100	0.003		0.0	0.00	HERRERA
551		BCC11FW	KBIY		0.100	0.003		0.0	0.00	HERRERA
552		BCC11HW	KDAI		0.050	0.001		14.5	0.42	HERRERA
553		BCC11V	V-FM		0.600	0.017		0.4	0.01	HERRERA
554		BCC12HW	KDAI		0.050	0.001		46.6	1.35	HERRERA
555		BCC12V	V-FM		0.350	0.010		0.0	0.00	HERRERA
556		BCC13FW	KWYI		1.100	0.032		2.0	0.06	HERRERA
557		BCC13HW	KBAYI		0.500	0.015		4.5	0.13	HERRERA
558		BCC13V	V-MF		0.300	0.009		0.4	0.01	HERRERA
559		BCC14HW	KBIY		0.050	0.001		1.5	0.04	HERRERA
560		BCC14V	V-FM		0.050	0.001		0.0	0.00	HERRERA
561		BCC15HW	KDIF		0.100	0.003		0.0	0.00	HERRERA
562		BCC15V	V-FM		0.550	0.016		3.5	0.10	HERRERA

APPENDIX 11A. GOLD AND SILVER ASSAYS

BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
563		BCC16HW	KDIFY		0.020	0.001		1.2	0.03	HERRERA
564		BCC16V	V-FM		0.050	0.001		2.5	0.07	HERRERA
565		BCC17HW	KDIF		0.020	0.001		1.8	0.05	HERRERA
566		BCC17V	V-F		0.050	0.001		9.0	0.26	HERRERA
567		BCC18HW	KDIF		0.150	0.004		3.5	0.10	HERRERA
568		BCC18V	V-F		0.100	0.003		0.5	0.01	HERRERA
569		BCC19HW	KDIF		0.050	0.001		4.8	0.14	HERRERA
570		BCC19V	V-FR		7.500	0.218		46.8	1.36	HERRERA
571		BCC20HW	KDIY		0.050	0.001		0.4	0.01	HERRERA
572		BCC20V	V-F		8.500	0.247		13.0	0.38	HERRERA
573		BCC21HW	KDIYF		0.020	0.001		6.3	0.18	HERRERA
574		BCC21V	V-FM		0.200	0.006		1.5	0.04	HERRERA
575		BCC22HW	KDIY		0.020	0.001		0.4	0.01	HERRERA
576		BCC22V	V-FM		0.100	0.003		2.0	0.06	HERRERA
577		BCC23HW	KDIF		0.050	0.001		12.5	0.36	HERRERA
578		BCC23V	V-R		0.100	0.003		0.7	0.02	HERRERA
579		BCC24HW	KDIF		0.050	0.001		0.1	0.00	HERRERA
580		BCC24V	V-F		5.300	0.154		14.0	0.41	HERRERA
581		BT1140	KBAI		0.050	0.001		0.4	0.01	HERRERA
582		BB-4	KBIA		0.050	0.001		0.4	0.01	HERRERA
583		BB-5	KBI1		0.020	0.001		0.2	0.01	HERRERA
584		BB-6A	V FR		1.700	0.049		2.0	0.06	HERRERA
585		BB-6BFW	KDAF		0.050	0.001		1.0	0.03	HERRERA
586		BB-6CFW	KDYPI		0.050	0.001		1.0	0.03	HERRERA
587		BB-6DFW	KDI1		0.050	0.001		0.2	0.01	HERRERA
588		BB 6EFW	KDIY		0.050	0.001		0.2	0.01	HERRERA
589		BB-6FFW	KDI1Q		0.020	0.001		0.2	0.01	HERRERA
590		BB-6GFW	KDI1Q		0.030	0.001		0.2	0.01	HERRERA
591		BB-6HFW	KDIYQ		0.030	0.001		0.2	0.01	HERRERA
592		BB-6IFW	KDIY		0.030	0.001		0.2	0.01	HERRERA
593		BE-6QHW	KWYP		15.000	0.435		20.0	0.58	HERRERA
594		BB-6RHW	KDYI		0.020	0.001		0.4	0.01	HERRERA
595		BB-6JHW	KDYI		0.020	0.001		0.5	0.01	HERRERA
596		BB-6KHW	KDYI		0.030	0.001		0.2	0.01	HERRERA
597		BB-6LHW	KDYI		0.030	0.001		0.5	0.01	HERRERA
598		BB-6MHW	KDYQ		0.050	0.001		0.2	0.01	HERRERA
599		BB-6NHW	KDYI		0.030	0.001		0.4	0.01	HERRERA
600		BB-6OHW	KDYIF		0.050	0.001		0.5	0.01	HERRERA
601		BB-6PHW	KDYI		0.020	0.001		0.5	0.01	HERRERA
602		BB-6	V-R		0.750	0.022		1.0	0.03	HERRERA
603		NSX-1	KDTA		0.100	0.003		0.9	0.03	HERRERA
604		NSY-1	KWTIA		0.350	0.010		7.0	0.20	HERRERA
605		NSX-2	KDTAI		0.100	0.003		1.0	0.03	HERRERA
606		NSX-3	KDTAF		0.650	0.019		8.4	0.24	HERRERA
607		NSX-4	KDTAI		0.100	0.003		2.5	0.07	HERRERA
608		NSY-4	KWAIF		0.150	0.004		3.3	0.10	HERRERA
609		NSX-5	KWTF		0.200	0.006		6.3	0.18	HERRERA
610		NSX-6	KDTA		0.200	0.006		3.0	0.09	HERRERA
611		NSX-7	KDTP		0.550	0.016		3.2	0.09	HERRERA
612		NSX-8	KDAI		0.050	0.001		2.5	0.07	HERRERA
613		NSX-9	V-R		2.100	0.061		0.7	0.02	HERRERA
614		NSY-9	KWTPA		0.300	0.009		5.4	0.16	HERRERA
615		NSX-10	V-FP		0.100	0.003		0.6	0.02	HERRERA
616		NSY-10	KDAI		0.020	0.001		2.4	0.07	HERRERA
617		NSX-11	KDAFT		0.050	0.001		1.0	0.03	HERRERA
618		NSY-11	V-R		0.500	0.015		1.3	0.04	HERRERA
619		NSX-12	KDAF		0.020	0.001		3.0	0.09	HERRERA
620		WH-3A	KBYI		0.030	0.001		0.4	0.01	HERRERA
621		WH-3B	KBYI		0.100	0.003		2.4	0.07	HERRERA

APPENDIX 11A. GOLD AND SILVER ASSAYS

BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
622		WH-3C	V-F		0.050	0.001		0.0	0.00	HERRERA
623		WH-3D	KDYI		0.020	0.001		0.1	0.00	HERRERA
624		WH-4AHQ	VBY		0.100	0.003		1.0	0.03	HERRERA
625		WH-5	IDAK		0.030	0.001		0.1	0.00	HERRERA
626		WH-6	KBY		0.030	0.001		0.7	0.02	HERRERA
627		WH-8	IDQ		0.020	0.001		0.0	0.00	HERRERA
628		WH-9AB	IOE		0.020	0.001		0.0	0.00	HERRERA
629		WH-10B	IOCE		0.020	0.001		0.0	0.00	HERRERA
630		WH-1V	V AQ		0.500	0.015		0.6	0.02	HERRERA
631		WH-1HA	KWIYF		0.450	0.013		1.5	0.04	HERRERA
632		WH-1HB	KDIAF		0.050	0.001		0.4	0.01	HERRERA
633		WH-1HC	KDYIF		0.020	0.001		0.6	0.02	HERRERA
634		WH-1HD	KDYI		0.200	0.006		0.4	0.01	HERRERA
635		WH-1HE	KDYIF		0.050	0.001		0.2	0.01	HERRERA
636		WH-1HF	KDYI		0.100	0.003		0.2	0.01	HERRERA
637		WH-1FG	KDYIF		0.150	0.004		4.6	0.13	HERRERA
638		WH-1FH	KDYI		0.100	0.003		0.3	0.01	HERRERA
639		WH-1F1	KDYI		0.100	0.003		0.3	0.01	HERRERA
640		WH-1FJ	KDYIF		0.050	0.001		0.1	0.00	HERRERA
641		WH-1FK	KDYIV		0.050	0.001		0.3	0.01	HERRERA
642		WH-1FL	KDYIA		0.100	0.003		0.1	0.00	HERRERA
643		WH-1FM	KDYI		0.020	0.001		1.0	0.03	HERRERA
644		WH-1FN	KDYI		0.020	0.001		0.0	0.00	HERRERA
645		WH-2V	V-FQ		3.300	0.096		6.3	0.18	HERRERA
646		WH-2H.5	KWYF		0.100	0.003		9.2	0.27	HERRERA
647		WH-2H1	KDYIA		0.020	0.001		0.9	0.03	HERRERA
648		WH-2H2	KDYIF		0.150	0.004		0.8	0.02	HERRERA
649		WH-2H3	KDYIF		0.020	0.001		0.6	0.02	HERRERA
650		WH-2H4	KDYIA		0.020	0.001		0.1	0.00	HERRERA
651		WH-2H5	KDYIA		0.020	0.001		0.2	0.01	HERRERA
652		WH-2H10	KDYIF		0.020	0.001		0.3	0.01	HERRERA
653		WH-2F.5	KWYAF		0.100	0.003		19.0	0.55	HERRERA
654		WH-2F1	KWYI		0.020	0.001		0.9	0.03	HERRERA
655		WH-2F2	KWYI		1.300	0.038		0.8	0.02	HERRERA
656		WH-2F3	KWYIA		0.150	0.004		1.2	0.03	HERRERA
657		WH-2F4	KDYIM		0.400	0.012		1.0	0.03	HERRERA
658		WH-2F5	KDYIF		0.050	0.001		0.7	0.02	HERRERA
659		WH-4V	V-FM		0.600	0.017		1.2	0.03	HERRERA
660		WH-4H.5	KDYI		0.020	0.001		1.0	0.03	HERRERA
661		WH-4H1	KDYFA		0.300	0.009		1.4	0.04	HERRERA
662		WN-4H2	KDYFI		0.100	0.003		3.7	0.11	HERRERA
663		WH-4H3	KDYI		0.020	0.001		0.4	0.01	HERRERA
664		WH-4H4	KDYI		0.100	0.003		0.2	0.00	HERRERA
665		WH-4H5	KDYIF		0.050	0.001		0.1	0.00	HERRERA
666		WH-4H6	KDYI		0.020	0.001		0.7	0.02	HERRERA
667		WH-4F.5	KWYIF		0.020	0.001		4.8	0.14	HERRERA
668		WH-4F1	KDYIF		0.020	0.001		0.4	0.01	HERRERA
669		WH-4F2	KDYIF		0.020	0.001		0.1	0.00	HERRERA
670		WH-4F3	KDYIF		0.020	0.001		0.1	0.00	HERRERA
671		UH84-31	KBY1A		0.020	0.001		1.0	0.03	HERRERA
672		UH84-32	VWAFQ		0.450	0.013		17.0	0.49	HERRERA
673		UH84-33	KDAFI		0.100	0.003		0.9	0.02	HERRERA
674		UH84-34	KDAI		0.020	0.001		0.9	0.02	HERRERA
675		UH84-35	KDAF		0.050	0.001		1.0	0.03	HERRERA
676		UH84-36	KDAI		0.020	0.001		0.2	0.01	HERRERA
677		UH84-37	KDAFI		0.050	0.001		1.9	0.06	HERRERA
678		UH84-38	KBEAXI		0.020	0.001		0.2	0.01	HERRERA
679		UH84-39	KBVQ		0.250	0.007		0.8	0.02	HERRERA
680		UH84-40	KDYA		0.020	0.001		(0.3)	(0.01)	HERRERA

APPENDIX 11A. GOLD AND SILVER ASSAYS

BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
681		UH84-41	KDAF		0.020	0.001		18.0	0.52	HERRERA
682		UH84-42	V-F		8.600	0.249		14.0	0.41	HERRERA
683		UH84-43	KWYFI		0.300	0.009		9.5	0.28	HERRERA
684		UH84-44	KDAIF		0.020	0.001		0.4	0.01	HERRERA
685		UH84-45	KDYI		0.020	0.001		0.7	0.02	HERRERA
686		UH84-46	V-MF		7.000	0.203		20.0	0.58	HERRERA
687		UH84-47	KDIA		0.020	0.001		0.5	0.01	HERRERA
688		MC-1A	KD1A		0.020	0.001		0.2	0.01	HERRERA
689		MC-1B	KWYIA		0.250	0.007		0.6	0.02	HERRERA
690		MC-2	KDIY		0.020	0.001		0.1	0.00	HERRERA
691		MC-3X	KDIY		0.020	0.001		0.3	0.01	HERRERA
692		MC-3Y	KDIA		0.050	0.001		0.1	0.00	HERRERA
693		MC-421	KDIY		0.020	0.001		0.1	0.00	HERRERA
694		MC 423	KDIA		0.020	0.001		0.1	0.00	HERRERA
695		MC-425	KDAYF		0.020	0.001		0.7	0.02	HERRERA
696		MC-426	KDAI		0.020	0.001		0.4	0.01	HERRERA
697		MC-427	KDAIY		0.050	0.001		0.4	0.01	HERRERA
698		MC-428	KDYFA		0.020	0.001		1.3	0.04	HERRERA
699		MC-4V	V-F		0.800	0.023		2.2	0.06	HERRERA
700		MC-429	KDAF		0.020	0.001		0.6	0.02	HERRERA
701		MC-430	KDYFI		0.100	0.003		17.0	0.49	HERRERA
702		MC-432	KWYI		0.020	0.001		0.4	0.01	HERRERA
703		MC-434	KDYAF		0.020	0.001		0.1	0.00	HERRERA
704		MC-436	KWFAY		0.100	0.003		1.2	0.03	HERRERA
705		MC-5	V-RF		0.400	0.012		0.5	0.01	HERRERA
706		MC-6A	V-RF		0.350	0.010		0.8	0.02	HERRERA
707		MC-6B	KWAFY		0.050	0.001		0.8	0.02	HERRERA
708		MC-7	KWAPY		0.050	0.001		0.6	0.02	HERRERA
709		MC 8	KWAYF		0.100	0.003		2.0	0.06	HERRERA
710		B2-17	VLPF		0.050	0.001		0.4	0.01	HERRERA
711		B2-20	SLQA		0.400	0.012		0.0	0.00	HERRERA
712		B2 31	SLPA		0.200	0.006		0.1	0.00	HERRERA
713		B2-33	VLAPS		26.000	0.754		0.1	0.00	HERRERA
714		B2-35	VWAF		2.300	0.067		0.1	0.00	HERRERA
715		B2-39	SLAPF		0.450	0.013		0.6	0.02	HERRERA
716		B2-45	SBAF		0.450	0.013		0.1	0.00	HERRERA
717		B2-46	V-IS		0.150	0.004		0.1	0.00	HERRERA
718		B2-53	ADKSF		0.050	0.001		0.1	0.00	HERRERA
719		B2-56	VWFA		0.050	0.001		0.9	0.02	HERRERA
720		B2-58	KBAY		0.050	0.001		5.7	0.17	HERRERA
721		B2-63	VWKAY		0.100	0.003		0.8	0.02	HERRERA
722		B2-65	KDAYI		0.020	0.001		1.0	0.03	HERRERA
723		B2-70	KDAXF		0.750	0.022		0.2	0.00	HERRERA
724		WH-4F4	KDYI		0.020	0.001		0.1	0.00	HERRERA
725		WH-4F5	KWYIF		0.550	0.016		2.8	0.08	HERRERA
726		WH-4F6	KDYIM		0.020	0.001		0.2	0.00	HERRERA
727		BB-1B	ADYF		0.250	0.007		0.7	0.02	HERRERA
728		BB-1	KBYI		0.150	0.004		0.4	0.01	HERRERA
729		BB-2	V-R		2.200	0.064		7.0	0.20	HERRERA
730		BB-3V	V-F		6.200	0.180		10.0	0.29	HERRERA
731		BB-3B	KDIAY		0.020	0.001		15.0	0.44	HERRERA
732		BB-3C	KDYF		0.020	0.001		2.0	0.06	HERRERA
733		BB-3D	KDYF		0.020	0.001		1.0	0.03	HERRERA
734		BB-3E	KDYI		0.020	0.001		1.5	0.04	HERRERA
735		BB-3F	KDYI		0.020	0.001		0.4	0.01	HERRERA
736		BB-3G	KDYF		0.020	0.001		0.5	0.01	HERRERA
737		BB-3H	KDYI		0.020	0.001		15.0	0.44	HERRERA
738		BB-3I	KDYVI		0.030	0.001		7.0	0.20	HERRERA
739		BB-3J	KDYI		0.020	0.001		1.5	0.04	HERRERA

APPENDIX 11A. GOLD AND SILVER ASSAYS										
BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
740		88-3K	KDYF		0.020	0.001		0.5	0.01	HERRERA
741		88-3L	KDYI		0.020	0.001		1.0	0.03	HERRERA
742		88-3M	KDAFY		0.030	0.001		0.4	0.01	HERRERA
743		88-3N	KDYI		0.050	0.001		0.5	0.01	HERRERA
744		88-3O	KDYAF		0.250	0.007		2.0	0.06	HERRERA
745		88-3P	KDYI		0.050	0.001		0.2	0.01	HERRERA
746		UH84-01	KDAFI		0.150	0.004		0.2	0.00	HERRERA
747		UH84-02	KDIA		0.030	0.001		0.0	0.00	HERRERA
748		UH84-03	VBQ		0.030	0.001		0.3	0.01	HERRERA
749		UH84-04	KDYI		0.020	0.001		0.0	0.00	HERRERA
750		UH84-05	VBQ		0.400	0.012		0.8	0.02	HERRERA
751		UH84-06	KWYI		0.350	0.010		38.0	1.10	HERRERA
752		UH84-07	V-MF		24.000	0.696		53.0	1.54	HERRERA
753		UH84-08	KDIA		0.050	0.001		0.5	0.01	HERRERA
754		UH84-09	KWYI		0.350	0.010		1.8	0.05	HERRERA
755		UH84-10	KDAFI		0.020	0.001		0.6	0.02	HERRERA
756		UH84-11	VWFI		20.000	0.580		36.0	1.04	HERRERA
757		UH84-12	KDYI		1.200	0.035		50.0	1.45	HERRERA
758		UH84-13	KDYI		0.030	0.001		0.3	0.01	HERRERA
759		UH84-14	VBQI		0.100	0.003		0.4	0.01	HERRERA
760		UH84-15	KWYIF		0.150	0.004		9.3	0.27	HERRERA
761		UH84-16	KDYI		0.020	0.001		0.0	0.00	HERRERA
762		UH84-17	KDAF		0.100	0.003		0.5	0.01	HERRERA
763		UH84-18	KDYI		0.030	0.001		8.7	0.25	HERRERA
764		UH84-19	V-F		35.000	1.015		63.0	1.83	HERRERA
765		UH84-20	KDFYI		0.350	0.010		21.0	0.61	HERRERA
766		UH84-21	V-MA		0.300	0.009		3.0	0.09	HERRERA
767		UH84-22	KBVY		0.450	0.013		6.9	0.20	HERRERA
768		UH84-23	KDFAI		0.100	0.003		2.3	0.07	HERRERA
769		UH84-24	KDYI		0.020	0.001		0.2	0.00	HERRERA
770		UH84-25C	VBQ		0.200	0.006		1.2	0.03	HERRERA
771		UH84-25V	V-F		2.200	0.064		8.9	0.26	HERRERA
772		UH84-26	KWYFI		0.020	0.001		0.0	0.02	HERRERA
773		UH84-27	KDYF		0.150	0.004		3.8	0.11	HERRERA
774		UH84-28	KWIQY		0.150	0.004		0.7	0.02	HERRERA
775		UH84-29	KDYI		0.020	0.001		0.9	0.02	HERRERA
776		UH84-30	KRYI		0.400	0.012		1.8	0.05	HERRERA
777		82-71	KBXAF		1.100	0.032		0.9	0.03	HERRERA
778		82-73	KDAYF		0.050	0.001		0.8	0.02	HERRERA
779		82-75	KDXAF		0.200	0.006		0.4	0.01	HERRERA
780		82-78	KDAF		29.000	0.841		0.3	0.01	HERRERA
781		82-81	KWYF		0.050	0.001		0.1	0.00	HERRERA
782		82-86	KWYAF		0.150	0.004		0.2	0.01	HERRERA
783		82-90	KBTAF		0.020	0.001		0.7	0.02	HERRERA
784		82-91	KDATF		0.020	0.001		0.7	0.02	HERRERA
785		82-93	V-F		0.020	0.001		100.0	2.90	HERRERA
786		82-95	KWIAF		0.100	0.003		0.8	0.02	HERRERA
787		82-97	KBAF		1.300	0.038		5.1	0.15	HERRERA
788		82-99	VWAF		0.050	0.001		0.8	0.02	HERRERA
789		82-110	KWAF		0.020	0.001		2.6	0.08	HERRERA
790		82-111	KDAFI		0.200	0.006		0.6	0.02	HERRERA
791		82-112	KWAFI		0.300	0.009		2.5	0.07	HERRERA
792		82-113	KDAI		0.400	0.012		0.6	0.02	HERRERA
793		82-115	KWTAF		0.150	0.004		2.1	0.06	HERRERA
794		82-119	KDAFI		0.250	0.007		1.3	0.04	HERRERA
795		82-123	KWAF		0.050	0.001		1.8	0.05	HERRERA
796		82-128	KDTIP		0.100	0.003		1.0	0.03	HERRERA
797		82-130	KWYFA		0.030	0.001		28.0	0.81	HERRERA
798		82-132	KWYFA		0.020	0.001		44.0	1.28	HERRERA

APPENDIX 11A. GOLD AND SILVER ASSAYS

BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
799		B2-135	V-F		0.020	0.001		43.0	1.26	HERRERA
800		B2-137	KDYFA		0.020	0.001		1.6	0.05	HERRERA
801		B2-138	KWTP		0.020	0.001		3.4	0.10	HERRERA
802		B2-139	KWTP		0.100	0.003		0.3	0.01	HERRERA
803		B2-140	KWTF		0.200	0.006		0.6	0.02	HERRERA
804		B2-141	XWTPF		0.050	0.001		0.9	0.02	HERRERA
805		B2-150	KDYI		0.020	0.001		0.1	0.00	HERRERA
806		B2-157	KWTPI		0.050	0.001		0.5	0.01	HERRERA
807		B2-160	KWTPI		0.020	0.001		0.2	0.00	HERRERA
808		B2-162	KDYPI		0.030	0.001		0.6	0.02	HERRERA
809		B2-173	KDITP		0.050	0.001		0.5	0.01	HERRERA
810		B2-184	KDIYP		0.020	0.001		0.4	0.01	HERRERA
811		B2-186	KDIF		0.020	0.001		0.3	0.01	HERRERA
812		B2-188	KDTF		0.020	0.001		0.4	0.01	HERRERA
813		B2-210	KWTI		0.850	0.025		17.0	0.49	HERRERA
814		B2-223	KDTA		0.020	0.001		1.8	0.05	HERRERA
815		B2-226	KDTI		0.020	0.001		2.8	0.08	HERRERA
816		B2-234	V-R		2.300	0.067		3.2	0.09	HERRERA
817		B2-238	KWRA		0.150	0.004		1.0	0.03	HERRERA
818		B2-240	KWAFY		0.200	0.006		4.5	0.13	HERRERA
819		B2-241	KWAFY		0.200	0.006		0.5	0.01	HERRERA
820		B2-242	KDYIA		0.020	0.001		1.0	0.03	HERRERA
821		B2-244	KDTF		0.020	0.001		7.8	0.23	HERRERA
822		B2-247	KDGI		0.050	0.001		0.1	0.00	HERRERA
823		RC-NA1	ADKF		0.100	0.003		1.0	0.03	HERRERA
824		RC-NA1X	ADKF		0.100	0.003		2.0	0.06	HERRERA
825		RC-NB1	ADKF		0.020	0.001		0.8	0.02	HERRERA
826		RC-NB1X	ADKF		0.020	0.001		1.7	0.05	HERRERA
827		RC-NB1XX	AWKF		0.050	0.001		0.2	0.00	HERRERA
828		RC-NC1	ADTK		0.150	0.004		4.6	0.13	HERRERA
829		RC-NC2	KDFA		0.350	0.010		1.1	0.03	HERRERA
830		BV-1	V-PA		3.400	0.099		700.0	20.30	HERRERA
831		EBR	HDAF		0.030	0.001		10.0	0.29	HERRERA
832		EBM	HNQ		0.060	0.002		7.0	0.20	HERRERA
833		EBW	HBAF		0.030	0.001		10.0	0.29	HERRERA
1000	AEC329				0.040	0.001		30.0	0.87	USGS
1001	AEC330				0.020	0.001		20.0	0.58	USGS
1002	AEC331				0.020	0.001		20.0	0.58	USGS
1003	AEC397				0.020	0.001		10.0	0.29	USGS
1004	AEC398				0.020	0.001		15.0	0.44	USGS
1005	AEC399				0.020	0.001		15.0	0.44	USGS
1006	AEC400				0.020	0.001		20.0	0.58	USGS
1007	AEC401				0.020	0.001		7.0	0.20	USGS
1008	AEC402				0.020	0.001		7.0	0.20	USGS
1009	AEC403				0.020	0.001		7.0	0.20	USGS
1010	AEC404				0.020	0.001		5.0	0.15	USGS
1013	AEC696	813-PI			0.020	0.001	0	30.0	0.87	USGS
1014	AEC805	814-1			0.020	0.001	0	20.0	0.58	USGS
1015	AEC806	814-2			0.020	0.001	0	15.0	0.44	USGS
1016	AEC694	815-P1			0.020	0.001	0	30.0	0.87	USGS
1017	AEC801	864-G1			0.020	0.001	0	20.0	0.58	USGS
1018	AEC508	855-011A			0.020	0.001	0	7.0	0.20	USGS
1019	AEC511	855-011B			0.300	0.009	0	50.0	1.45	USGS
1020	AEC509	855-011C			0.020	0.001	0	10.0	0.29	USGS
1021	AEC510	855-011D			1.100	0.032	0	30.0	0.87	USGS
1022	AEC546	855-R12			0.020	0.001	0	15.0	0.44	USGS
1023	AEC577	855-D13A			0.300	0.009	0	50.0	1.45	USGS
1024	AEC565	855-D13B			0.200	0.006	0	10.0	0.29	USGS
1025	AEC578	855-P14A			1.200	0.035	0	15.0	0.44	USGS

APPENDIX 11A. GOLD AND SILVER ASSAYS										
BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
1026	AEC566	855-D14B			0.060	0.002	0	20.0	0.58	USGS
1027	AEC547	855-D15			0.020	0.001	0	20.0	0.58	USGS
1028	AEC564	855-D16A			1.800	0.052	0	10.0	0.29	USGS
1029	AEC567	855-D16B			0.500	0.015	0	0.0	0.00	USGS
1030	AEC579	855-D17A			0.200	0.006	0	20.0	0.58	USGS
1031	AEC568	855-D17B			0.040	0.001	0	15.0	0.44	USGS
1032	AEC572	855-D18A			0.080	0.002	0	20.0	0.58	USGS
1033	AEC573	855-D18B			0.060	0.002	0	30.0	0.87	USGS
1034	AEC555	855-D19A			0.080	0.002	0	20.0	0.58	USGS
1035	AEC556	855-019B			0.140	0.004	0	15.0	0.44	USGS
1036	AEC557	855-D20			3.600	0.104	0	15.0	0.44	USGS
1037	AEC558	855-021			0.060	0.002	0	30.0	0.87	USGS
1038	AEC569	855-P22			0.020	0.001	0	20.0	0.58	USGS
1039	AEC559	855-P23			0.020	0.001	0	30.0	0.87	USGS
1040	AEC560	855-P24			0.020	0.001	0	20.0	0.58	USGS
1041	AEC561	855-P25			0.020	0.001	0	20.0	0.58	USGS
1042	AEC562	855-P26			0.040	0.001	0	30.0	0.87	USGS
1043	AEC563	855-P27			0.020	0.001	0	20.0	0.58	USGS
1044	AEC548	855-028			0.020	0.001	0	20.0	0.58	USGS
1045	AEC575	855-D29A			0.040	0.001	0	30.0	0.87	USGS
1046	AEC564	855-P29B			0.040	0.001	0	15.0	0.44	USGS
1047	AEC576	855-D30A			2.000	0.058	0	20.0	0.58	USGS
1048	AEC571	855-D30B			0.040	0.001	0	50.0	1.45	USGS
1049	AEC549	855-031			0.020	0.001	0	20.0	0.58	USGS
1050	AEC550	855-032			0.020	0.001	0	20.0	0.58	USGS
1051	AEC580	855-D33A			0.020	0.001	0	50.0	1.45	USGS
1052	AEC570	855-P33B			0.040	0.001	0	30.0	0.87	USGS
1053	AEC551	855-034A			0.020	0.001	0	20.0	0.58	USGS
1054	AEC574	855-034B			0.020	0.001	0	20.0	0.58	USGS
1055	AEC553	855-P35A			0.020	0.001	0	20.0	0.58	USGS
1056	AEC552	855-D36			0.020	0.001	0	30.0	0.87	USGS
1057	AEC488	855-037A			0.020	0.001		20.0	0.58	USGS
1058	AEC473	855-P37B			0.020	0.001		10.0	0.29	USGS
1059	AEC474	855-P37C			0.020	0.001		15.0	0.44	USGS
1060	AEC475	855-P38			0.080	0.002		30.0	0.87	USGS
1061	AEC489	855-P39A			0.020	0.001		10.0	0.29	USGS
1062	AEC476	855-P39B			0.020	0.001		10.0	0.87	USGS
1063	AEC525	855-040			0.020	0.001	0	30.0	0.87	USGS
1064	AEC499	855-D41A			8.800	0.255	0	10.0	0.29	USGS
1065	AEC477	855-P41B			0.400	0.012		70.0	2.03	USGS
1066	AEC500	855-D41C			0.900	0.026	0	700.0	20.30	USGS
1067	AEC501	855-D41D			0.900	0.026	0	1,000.0	29.00	USGS
1068	AEC502	855-D41E			0.020	0.001	0	700.0	20.30	USGS
1069	AEC490	855-D42A			0.020	0.001	0	7.0	0.20	USGS
1070	AEC504	855-D42B			0.200	0.006	0	10.0	0.29	USGS
1071	AEC503	855-D42C			0.020	0.001	0	30.0	0.87	USGS
1072	AEC505	855-D42D			0.020	0.001	0	10.0	0.29	USGS
1073	AEC491	855-D42E			0.800	0.023	0	10.0	0.29	USGS
1074	AEC492	855-P42F			4.300	0.125	0	30.0	0.87	USGS
1075	AEC493	855-P42G			1.200	0.035		7.0	0.20	USGS
1076	AEC494	855-P43A			1.600	0.046	0	0.0	0.00	USGS
1077	AEC478	855-P43B			1.000	0.029		20.0	0.58	USGS
1078	AEC495	855-P43C			0.020	0.001	0	7.0	0.20	USGS
1079	AEC526	855-043D			0.020	0.001	0	20.0	0.58	USGS
1080	AEC479	855-P44			0.020	0.001		20.0	0.58	USGS
1081	AEC487	855-D45A			0.020	0.001		10.0	0.29	USGS
1082	AEC496	855-D45B			0.020	0.001	0	20.0	0.58	USGS
1083	AEC480	855-D45C			0.020	0.001		20.0	0.58	USGS
1084	AEC481	855-P46A			0.020	0.001		10.0	0.29	USGS

APPENDIX 11A. GOLD AND SILVER ASSAYS

BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
1085	AEC497	855-D46B			0.020	0.001	0	20.0	0.58	USGS
1086	AEC498	855-D46C			0.020	0.001	0	0.0	0.00	USGS
1087	AEC483	855-H46D			0.020	0.001		15.0	0.44	USGS
1088	AEC482	855-P46E			0.020	0.001		30.0	0.87	USGS
1089	AEC512	855-46m01			0.020	0.001	0	30.0	0.87	USGS
1090	AEC513	855-46m02			0.020	0.001	0	30.0	0.87	USGS
1091	AEC514	855-46m03			0.060	0.002	0	20.0	0.58	USGS
1092	AEC515	855-46m04			0.020	0.001	0	20.0	0.58	USGS
1093	AEC516	855-46m05			0.020	0.001	0	20.0	0.58	USGS
1094	AEC517	855-46m06			0.100	0.003	0	30.0	0.87	USGS
1095	AEC518	855-46m07			0.020	0.001	0	20.0	0.58	USGS
1096	AEC519	855-46m08			0.020	0.001	0	20.0	0.58	USGS
1097	AEC520	855-46m09A			0.700	0.020	0	5.0	0.15	USGS
1098	AEC521	855-46m09B			0.100	0.003	0	10.0	0.29	USGS
1099	AEC522	855-46m09C			0.400	0.012	0	20.0	0.58	USGS
1100	AEC523	855-46m09D			0.020	0.001	0	5.0	0.15	USGS
1101	AEC527	855-D47A			1.100	0.032	0	5.0	0.15	USGS
1102	AEC506	855-D47B			0.020	0.001	0	7.0	0.20	USGS
1103	AEC484	855-D47C			0.020	0.001		50.0	1.45	USGS
1104	AEC528	855-D47D			0.020	0.001	0	7.0	0.20	USGS
1105	AEC488	855-D47F			0.020	0.001		30.0	0.87	USGS
1106	AEC486	855-D48			0.020	0.001		20.0	0.58	USGS
1107	AEC507	855-D49			1.500	0.044	0	500.0	14.50	USGS
1108	AEC524	855-H50			0.020	0.001	0	20.0	0.58	USGS
1109	AEC588	855-051			0.200	0.006	0	30.0	0.87	USGS
1110	AEC583	855-D52			0.060	0.002	0	30.0	0.87	USGS
1111	AEC581	855-P54A			0.040	0.001	0	30.0	0.87	USGS
1112	AEC590	855-P54B			0.020	0.001	0	10.0	0.29	USGS
1113	AEC591	855-D55A			0.060	0.002	0	30.0	0.87	USGS
1114	ABC585	855-055B			0.020	0.001	0	10.0	0.29	USGS
1115	AEC592	855-057			0.020	0.001	0	20.0	0.58	USGS
1116	AEC586	855-D58A#1			23.000	0.667	30	20.0	0.58	USGS
1117	AEC587	855-D58A#2			40.000	1.160	15	20.0	0.58	USGS
1118	AEC582	855-D58B			0.040	0.001	0	20.0	0.58	USGS
1119	AEC584	855-P59A			0.020	0.001	0	15.0	0.44	USGS
1120	AEC589	855-D59B			0.020	0.001	0	100.0	2.90	USGS
1121	AEC888	855-MA			20.000	0.580	20	20,000.0	580.00	USGS
1122	AEC809	855-MB			0.100	0.003	0	30.0	0.87	USGS
1123	AEC461	856-04B			0.200	0.006		5.0	0.15	USGS
1124	AEC462	856-04C			0.300	0.009		7.0	0.20	USGS
1125	AEC471	856-04D			0.020	0.001		15.0	0.44	USGS
1126	AEC472	856-D4E			0.020	0.001		10.0	0.29	USGS
1127	AEC603	856-G8			0.020	0.001	0	70.0	2.03	USGS
1128	AEC665	856-09B			0.020	0.001	0	15.0	0.44	USGS
1129	AEC604	856-G10			0.020	0.001	0	15.0	0.44	USGS
1130	AEC405	856-P11			0.020	0.001		5.0	0.15	USGS
1131	AEC406	856-P12			0.020	0.001		7.0	0.20	USGS
1132	AEC407	856-P13			0.020	0.001		5.0	0.15	USGS
1133	AEC408	856-P14			0.020	0.001		5.0	0.15	USGS
1134	AEC409	856-P15A			0.020	0.001		5.0	0.15	USGS
1135	AEC410	856-P15B			0.020	0.001		10.0	0.29	USGS
1136	AEC411	856-P16			0.020	0.001		0.0	0.00	USGS
1137	AEC412	858-P17			0.020	0.001		7.0	0.20	USGS
1138	AEC413	856-P18			0.020	0.001		10.0	0.29	USGS
1139	AEC414	856-P19			0.040	0.001		5.0	0.15	USGS
1140	AEC415	856-P20			0.020	0.001		10.0	0.29	USGS
1141	AEC416	856-P21A			0.020	0.001		7.0	0.20	USGS
1142	AEC417	856-P21B			0.060	0.002		0.0	0.00	USGS
1143	AEC418	856-P22A			0.040	0.001		5.0	0.15	USGS

APPENDIX 11A. GOLD AND SILVER ASSAYS

BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
1144	AEC419	856-P22B			0.200	0.006		7.0	0.20	USGS
1145	AEC420	856-P23			0.040	0.001		5.0	0.15	USGS
1146	AEC421	856-P24A			0.020	0.001		7.0	0.20	USGS
1147	AEC422	856-P24B			0.020	0.001		5.0	0.15	USGS
1148	AEC423	856-P25			0.020	0.001		15.0	0.44	USGS
1149	AEC424	856-P26			0.020	0.001		5.0	0.15	USGS
1150	AEC425	856-P27			0.020	0.001		7.0	0.20	USGS
1151	AEC426	856-P28			0.020	0.001		10.0	0.29	USGS
1152	AEC445	856-P29A			0.000	0.000		15.0	0.44	USGS
1153	AEC427	856-P29B			0.020	0.001		15.0	0.44	USGS
1154	AEC428	856-P30			0.020	0.001		10.0	0.29	USGS
1155	AEC429	856-P31A			0.020	0.001		15.0	0.44	USGS
1156	AEC447	856-P31B			0.200	0.006		15.0	0.44	USGS
1157	AEC448	856-P32A			0.020	0.001		30.0	0.87	USGS
1158	AEC449	856-P32B			0.020	0.001		15.0	0.44	USGS
1159	AEC430	856-P33			0.020	0.001		10.0	0.29	USGS
1160	AEC431	856-P34A			0.040	0.001		7.0	0.20	USGS
1161	AEC432	856-P34B			0.020	0.001		7.0	0.20	USGS
1162	AEC450	856-D35A			0.400	0.012		30.0	0.87	USGS
1163	AEC433	856-D35B			0.080	0.002		20.0	0.58	USGS
1164	AEC434	856-P36			0.040	0.001		5.0	0.15	USGS
1165	AEC436	856-P37A			0.060	0.002		0.0	0.00	USGS
1166	AEC435	856-P37B			0.020	0.001		15.0	0.44	USGS
1167	AEC437	856-P38A			0.020	0.001		0.0	0.00	USGS
1168	AEC438	856-P38B			0.600	0.017		10.0	0.29	USGS
1169	AEC439	856-P39A			0.020	0.001		0.0	0.00	USGS
1170	AEC440	856-P39B			0.100	0.003		20.0	0.58	USGS
1171	AEC451	856-D40A			0.020	0.001		7.0	0.20	USGS
1172	AEC456	856-D40B			0.020	0.001		0.0	0.00	USGS
1173	AEC452	856-D40C			0.020	0.001		10.0	0.29	USGS
1174	AEC453	856-D41A			0.100	0.003		7.0	0.20	USGS
1175	AEC441	856-D41B			0.200	0.006		7.0	0.20	USGS
1176	AEC442	856-P42A			0.020	0.001		0.0	0.00	USGS
1177	AEC443	856-P42B			0.020	0.001		100.0	2.90	USGS
1178	AEC444	856-M43			0.020	0.001		30.0	0.87	USGS
1179	AEC446	856-P44			0.020	0.001		20.0	0.58	USGS
1180	AEC457	856-046			0.500	0.015		30.0	0.87	USGS
1181	AEC464	856-P46B			0.300	0.009		50.0	1.45	USGS
1182	AEC465	856-P46C			0.200	0.006		20.0	0.58	USGS
1183	AEC458	856-047			0.900	0.026		30.0	0.87	USGS
1184	AEC459	856-P48A			0.400	0.012		7.0	0.20	USGS
1185	AEC460	856-P48B			0.020	0.001		20.0	0.58	USGS
1186	AEC463	856-P49A			1.400	0.041	0	7.0	0.20	USGS
1187	AEC466	856-050			0.300	0.009		7.0	0.20	USGS
1188	AEC467	856-051A			1.900	0.055		7.0	0.20	USGS
1189	AEC468	856-051B			0.080	0.002		20.0	0.58	USGS
1190	AEC529	856-052			0.600	0.017	0	20.0	0.58	USGS
1191	AEC530	856-053			0.020	0.001	0	15.0	0.44	USGS
1192	AEC531	856-D54A			0.020	0.001	0	7.0	0.20	USGS
1193	AEC532	856-D54B			0.020	0.001	0	30.0	0.87	USGS
1194	AEC535	856-D54C			0.020	0.001	0	0.0	0.00	USGS
1195	AEC542	856-D54D			0.020	0.001	0	15.0	0.44	USGS
1196	AEC536	856-055A			0.020	0.001	0	30.0	0.87	USGS
1197	AEC533	856-D55B			0.020	0.001	0	20.0	0.58	USGS
1198	AEC534	856-P56			0.020	0.001	0	20.0	0.58	USGS
1199	AEC541	856-D57			0.020	0.001	0	20.0	0.58	USGS
1200	AEC537	856-058A			0.020	0.001	0	50.0	1.45	USGS
1201	AEC544	856-D58B			0.020	0.001	0	30.0	0.87	USGS
1202	AEC545	856-0591			0.020	0.001	0	20.0	0.58	USGS

APPENDIX 11A. GOLD AND SILVER ASSAYS										
BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
1203	AEC538	856-P60A			0.020	0.001	0	30.0	0.87	USGS
1204	AEC539	856-P60B			0.020	0.001	0	30.0	0.87	USGS
1205	AEC543	856-060C			0.020	0.001	0	20.0	0.58	USGS
1206	AEC540	856-P61			0.020	0.001	0	20.0	0.58	USGS
1207	AEC469	856-062			0.300	0.009		20.0	0.58	USGS
1208	AEC470	856-063			0.020	0.001		20.0	0.58	USGS
1209	AEC629	856-D64A			0.400	0.012	0	30.0	0.87	USGS
1210	AEC637	856-D64B			3.800	0.110	0	5.0	0.15	USGS
1211	AEC647	856-D64C			0.020	0.001	0	30.0	0.87	USGS
1212	AEC648	856-D65A			0.080	0.002	0	20.0	0.58	USGS
1213	AEC638	856-D65B			8.100	0.236	0	15.0	0.44	USGS
1214	AEC650	856-D65C			0.040	0.001	0	20.0	0.58	USGS
1215	AEC639	856-P66A			4.800	0.139	0	15.0	0.44	USGS
1216	AEC630	856-066B			1.000	0.029	0	30.0	0.87	USGS
1217	AEC640	856-P67A			1.800	0.052	0	10.0	0.29	USGS
1218	AEC631	856-P67B			0.040	0.001	0	50.0	1.45	USGS
1219	AEC641	856-068A			3.700	0.107	0	10.0	0.29	USGS
1220	AEC632	856 068B			0.100	0.003	0	30.0	0.87	USGS
1221	AEC649	856-069A			0.020	0.001	0	20.0	0.58	USGS
1222	AEC642	856-069B			12.000	0.348	10	15.0	0.44	USGS
1223	AEC643	856-D69C			4.400	0.128	0	7.0	0.20	USGS
1224	AEC651	856-D69D			0.020	0.001	0	20.0	0.58	USGS
1225	AEC633	856-D70A			0.300	0.009	0	10.0	0.29	USGS
1226	AEC634	856-D70B			0.020	0.001	0	5.0	0.15	USGS
1227	AEC655	856-D71A			0.100	0.003	0	20.0	0.58	USGS
1228	AEC652	856-D71B			0.020	0.001	0	30.0	0.87	USGS
1229	AEC657	856-D71C1			0.020	0.001	0	7.0	0.20	USGS
1230	AEC658	856-D71C2			0.020	0.001	0	30.0	0.87	USGS
1231	AEC653	856-D71D			0.200	0.006	0	20.0	0.58	USGS
1232	AEC644	856-D71E			4.400	0.128	0	10.0	0.29	USGS
1233	AEC656	856-D71F			0.020	0.001	0	5.0	0.15	USGS
1234	AEC654	856-D71G			0.020	0.001	0	10.0	0.29	USGS
1235	AEC645	856 P72			0.600	0.017	0	7.0	0.20	USGS
1236	AEC635	856-D74A			0.020	0.001	0	15.0	0.44	USGS
1237	AEC646	856-D74B			9.700	0.281	0	5.0	0.15	USGS
1238	AEC636	856-D74C			0.020	0.001	0	30.0	0.87	USGS
1239	AEC712	856-P75A			7.200	0.209	0	10.0	0.29	USGS
1240	AEC713	856-P75B			13.000	0.377	10	20.0	0.58	USGS
1241	AEC715	856-P75C			0.100	0.003	0	30.0	0.87	USGS
1242	AEC714	856-P75D			0.060	0.002	0	15.0	0.44	USGS
1243	AEC688	856-D76			0.020	0.001	0	30.0	0.87	USGS
1244	AEC670	856-P76C			0.060	0.002	0	15.0	0.44	USGS
1245	AEC660	856-D77A			0.100	0.003	0	50.0	1.45	USGS
1246	AEC667	856-D77B			0.040	0.001	0	15.0	0.44	USGS
1247	AEC682	856-D77C1			15.000	0.435	0	20.0	0.58	USGS
1248	AEC683	856-D77C1A			0.400	0.012	0	15.0	0.44	USGS
1249	AEC680	856-D77D			0.040	0.001	0	20.0	0.58	USGS
1250	AEC677	856-D77F			0.060	0.002	0	20.0	0.58	USGS
1251	AEC684	856-078A			1.900	0.055	0	20.0	0.58	USGS
1252	AEC668	856-078B			0.200	0.006	0	30.0	0.87	USGS
1253	AEC669	856-078C			0.040	0.001	0	30.0	0.87	USGS
1254	AEC685	856-D79A			1.900	0.055	0	70.0	2.03	USGS
1255	AEC661	856-D79B			0.500	0.015	0	50.0	1.45	USGS
1256	AEC662	856-D80A			0.040	0.001	0	20.0	0.58	USGS
1257	AEC671	856-D80B			0.900	0.026	0	15.0	0.44	USGS
1258	AEC672	856-P81A			0.800	0.023	0	30.0	0.87	USGS
1259	AEC673	856-P81B			0.400	0.012	0	20.0	0.58	USGS
1260	AEC681	856-P81C			0.200	0.006	0	70.0	2.03	USGS
1261	AEC663	856-P81D			0.800	0.023	0	30.0	0.87	USGS

APPENDIX 11A. GOLD AND SILVER ASSAYS

BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
1262	AEC684	856-D82A			0.500	0.015	0	50.0	1.46	USGS
1263	AEC674	856-D82B			0.300	0.009	0	7.0	0.20	USGS
1264	AEC678	856-D82C			0.020	0.001	0	7.0	0.20	USGS
1265	AEC698	856-P83A			0.080	0.002	0	30.0	0.87	USGS
1266	AEC676	856-D83B			0.080	0.002	0	20.0	0.58	USGS
1267	AEC675	856-D83C			0.040	0.001	0	50.0	1.46	USGS
1268	AEC679	856-P84			0.020	0.001	0	15.0	0.44	USGS
1269	AEC687	856-D85A			0.040	0.001	0	20.0	0.58	USGS
1270	AEC700	856-D85B			0.080	0.002	0	20.0	0.58	USGS
1271	AEC688	856-D85C			0.800	0.023	0	15.0	0.44	USGS
1272	AEC699	856-D85D			0.020	0.001	0	20.0	0.58	USGS
1273	AEC691	856-D85E			0.100	0.003	0	10.0	0.29	USGS
1274	AEC692	856-D86A			0.020	0.001	0	30.0	0.87	USGS
1275	AEC689	856-D86B			0.080	0.002	0	20.0	0.58	USGS
1276	AEC697	856-D86C			8.600	0.249	15	15.0	0.44	USGS
1277	AEC690	856-D86D			0.500	0.015	0	15.0	0.44	USGS
1278	AEC693	856-P86E			0.020	0.001	0	30.0	0.87	USGS
1279	AEC701	856 P86E2			0.020	0.001	0	30.0	0.87	USGS
1280	AEC701	856-D86F			25.000	0.725	0	20.0	0.58	USGS
1281	AEC593	857-P1A			0.100	0.003	0	30.0	0.87	USGS
1282	AEC594	857-P1B			0.080	0.002	0	30.0	0.87	USGS
1283	AEC601	857-P1B			0.100	0.003	0	50.0	1.46	USGS
1284	AEC608	857-P2A			0.020	0.001	0	30.0	0.87	USGS
1285	AEC595	857-P2B			0.040	0.001	0	50.0	1.46	USGS
1286	AEC617	857-P3B			0.060	0.002	0	20.0	0.58	USGS
1287	AEC596	857 D4			0.020	0.001	0	20.0	0.58	USGS
1288	AEC618	857-D5A			1.700	0.049	0	30.0	0.87	USGS
1289	AEC619	857-D5B			0.020	0.001	0	20.0	0.58	USGS
1290	AEC597	857 P6A			0.020	0.001	0	7.0	0.20	USGS
1291	AEC598	857-P6B			0.020	0.001	0	20.0	0.58	USGS
1292	AEC599	857-07			0.020	0.001	0	15.0	0.44	USGS
1293	AEC620	857-P8			0.020	0.001	0	20.0	0.58	USGS
1294	AEC600	857-O8B			0.020	0.001	0	20.0	0.58	USGS
1295	AEC621	857-P9A			0.020	0.001	0	20.0	0.58	USGS
1296	AEC627	857-P9B			0.300	0.009	0	30.0	0.87	USGS
1297	AEC602	857 P11			0.600	0.017	0	20.0	0.58	USGS
1298	AEC622	857-P12A			0.040	0.001	0	7.0	0.20	USGS
1299	AEC603	857-P12B			0.100	0.003	0	20.0	0.58	USGS
1300	AEC623	857-P13			0.020	0.001	0	20.0	0.58	USGS
1301	AEC604	857-014			0.020	0.001	0	50.0	1.46	USGS
1302	AEC605	857-D15A			0.100	0.003	0	15.0	0.44	USGS
1303	AEC606	857-D15B			0.020	0.001	0	15.0	0.44	USGS
1304	AEC613	857-D15B			0.300	0.009	0	50.0	1.46	USGS
1305	AEC609	857-D15C#1			0.040	0.001	0	50.0	1.46	USGS
1306	AEC611	857-D15C2			0.080	0.002	0	5.0	0.15	USGS
1307	AEC628	857-D15E			0.020	0.001	0	30.0	0.87	USGS
1308	AEC610	857-D16A			1.000	0.029	0	50.0	1.46	USGS
1309	AEC612	857 D16B			3.800	0.110	0	20.0	0.58	USGS
1310	AEC625	857-017			0.020	0.001	0	30.0	0.87	USGS
1311	AEC607	857-018			0.020	0.001	0	70.0	2.03	USGS
1312	AEC615	857-D19A			0.040	0.001	0	20.0	0.58	USGS
1313	AEC614	857-D19B			0.700	0.020	0	50.0	1.46	USGS
1314	AEC624	857-P20A			0.020	0.001	0	20.0	0.58	USGS
1315	AEC626	857-P20B			0.020	0.001	0	70.0	2.03	USGS
1316	AEC616	857-P34			0.040	0.001	0	20.0	0.58	USGS
1317	AEC671	BT-0032			0.020	0.001	0	7.0	0.20	USGS
1318	AEC750	BT-0068A			0.020	0.001	0	5.0	0.15	USGS
1319	AEC777	BT-0110			0.020	0.001	0	20.0	0.58	USGS
1320	AEC749	BT-0129A			0.020	0.001	0	50.0	1.46	USGS

APPENDIX 11A. GOLD AND SILVER ASSAYS

BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
1321	AEC869	BT-0129B			0.040	0.001	0	15.0	0.44	USGS
1322	AEC868	BT-0155			0.020	0.001	0	20.0	0.58	USGS
1323	AEC867	BT-0200A			0.020	0.001	0	10.0	0.29	USGS
1324	AEC887	BT-0200B			0.020	0.001	0	20.0	0.58	USGS
1325	AEC776	BT-0220			0.020	0.001	0	15.0	0.44	USGS
1326	AEC866	BT-0250			0.040	0.001	0	10.0	0.29	USGS
1327	AEC864	BT-0300A			0.040	0.001	0	10.0	0.29	USGS
1328	AEC865	BT-0300B			0.020	0.001	0	30.0	0.87	USGS
1329	AEC775	BT-0340			0.020	0.001	0	30.0	0.87	USGS
1330	AEC774	BT-0346			0.060	0.002	0	30.0	0.87	USGS
1331	AEC773	BT-0377			0.020	0.001	0	30.0	0.87	USGS
1332	AEC863	BT-0396			0.060	0.002	0	30.0	0.87	USGS
1333	AEC748	BT-0397			0.020	0.001	0	5.0	0.15	USGS
1334	AEC772	BT-0401			0.040	0.001	0	50.0	1.45	USGS
1335	AEC862	BT-0415			0.020	0.001	0	5.0	0.15	USGS
1336	AEC884	BT-0425			0.020	0.001	0	5.0	0.15	USGS
1337	AEC771	BT-0444			0.100	0.003	0	10.0	0.29	USGS
1338	AEC861	BT-0450			0.020	0.001	0	5.0	0.15	USGS
1339	AEC860	BT-0505			0.020	0.001	0	5.0	0.15	USGS
1340	AEC770	BT-0509			0.040	0.001	0	15.0	0.44	USGS
1341	AEC747	BT 0626			0.020	0.001	0	10.0	0.20	USGS
1342	AEC883	BT-0548B			0.040	0.001	0	20.0	0.58	USGS
1343	AEC859	BT-0549			0.020	0.001	0	5.0	0.15	USGS
1344	AEC769	BT-0551			0.040	0.001	0	10.0	0.29	USGS
1345	AEC768	BT-0563			0.100	0.003	0	10.0	0.29	USGS
1346	AEC746	BT-0596A			0.080	0.002	0	10.0	0.29	USGS
1347	AEC858	BT-0598			0.020	0.001	0	5.0	0.15	USGS
1348	AEC767	BT-0601			0.060	0.002	0	20.0	0.58	USGS
1349	AEC857	BT 0629			0.020	0.001	0	5.0	0.15	USGS
1350	AEC745	BT-0630A			0.080	0.002	0	10.0	0.28	USGS
1351	AEC882	BT-0630B			0.020	0.001	0	5.0	0.15	USGS
1352	AEC856	BT-0650			0.020	0.001	0	7.0	0.20	USGS
1353	AEC870	BT-0688			0.020	0.001	0	20.0	0.58	USGS
1354	AEC765	BT-0698A			0.060	0.002	0	7.0	0.20	USGS
1355	AEC766	BT-0698B			0.020	0.001	0	15.0	0.44	USGS
1356	AEC855	BT-0736			0.020	0.001	0	7.0	0.20	USGS
1357	AEC744	BT-0737			0.080	0.002	0	10.0	0.29	USGS
1358	AEC854	BT-0759			0.020	0.001	0	7.0	0.20	USGS
1359	AEC743	BT-0761			0.100	0.003	0	15.0	0.44	USGS
1360	AEC886	BT-0784			0.080	0.002	0	20.0	0.58	USGS
1361	AEC764	BT-0812			0.040	0.001	0	5.0	0.15	USGS
1362	AEC742	BT-0815A			0.100	0.003	0	5.0	0.15	USGS
1363	AEC853	BT-0815B			0.080	0.002	0	7.0	0.20	USGS
1364	AEC852	BT-0846			0.020	0.001	0	5.0	0.15	USGS
1365	AEC741	BT 0849A			0.100	0.003	0	10.0	0.29	USGS
1366	AEC740	BT-0879A			0.400	0.012	0	10.0	0.29	USGS
1367	AEC800	BT-0879B			0.020	0.001	0	7.0	0.20	USGS
1368	AEC739	BT-0903A			0.020	0.001	0	5.0	0.15	USGS
1369	AEC885	BT-0903B			0.020	0.001	0	0.0	0.00	USGS
1370	AEC738	BT-0924A			0.400	0.012	0	0.0	0.00	USGS
1371	AEC799	BT-0924B			0.020	0.001	0	0.0	0.00	USGS
1372	AEC763	BT-0939			0.040	0.001	0	5.0	0.15	USGS
1373	AEC798	BT-0950			0.040	0.001	0	5.0	0.15	USGS
1374	AEC797	BT-0969			0.020	0.001	0	0.0	0.00	USGS
1375	AEC737	BT-0972A			0.500	0.015	0	5.0	0.15	USGS
1376	AEC881	BT-0972B			0.100	0.003	0	5.0	0.15	USGS
1377	AEC796	BT-1000			0.020	0.001	0	30.0	0.87	USGS
1378	AEC736	BT-1025A			0.900	0.026	0	0.0	0.00	USGS
1379	AEC795	BT-1025B			0.020	0.001	0	0.0	0.00	USGS

APPENDIX 11A. GOLD AND SILVER ASSAYS										
BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
1380	AEC794	BT-1050			0.040	0.001	0	0.0	0.00	USGS
1381	AEC762	BT-1053			0.040	0.001	0	20.0	0.58	USGS
1382	AEC761	BT-1076			0.100	0.003	0	5.0	0.15	USGS
1383	AEC735	BT-1090A			0.020	0.001	0	10.0	0.29	USGS
1384	AEC793	BT-1090B			0.020	0.001	0	5.0	0.15	USGS
1385	AEC734	BT-1116A			0.020	0.001	0	10.0	0.29	USGS
1386	AEC792	BT-1116B			0.040	0.001	0	5.0	0.15	USGS
1387	AEC880	BT-1150			0.040	0.001	0	15.0	0.44	USGS
1388	AEC760	BT-1166A			0.040	0.001	0	5.0	0.15	USGS
1389	AEC791	BT-1166B			0.020	0.001	0	5.0	0.15	USGS
1390	AEC733	BT-1205A			0.020	0.001	0	5.0	0.15	USGS
1391	AEC790	BT-1205B			0.020	0.001	0	1,000.0	29.00	USGS
1392	AEC732	BT-1227			0.060	0.002	0	10.0	0.29	USGS
1393	AEC759	BT-1227/05			0.060	0.002	0	5.0	0.15	USGS
1394	AEC731	BT-1246A			0.020	0.001	0	30.0	0.87	USGS
1395	AEC789	BT-1246B			0.040	0.001	0	0.0	0.00	USGS
1396	AEC879	BT-1273A			0.040	0.001	0	5.0	0.15	USGS
1397	AEC758	BT-1273B			0.040	0.001	0	10.0	0.29	USGS
1398	AEC730	BT-1292A			0.060	0.002	0	30.0	0.87	USGS
1399	AEC788	BT-1292B			0.020	0.001	0	5.0	0.15	USGS
1400	AEC787	BT-1306			0.040	0.001	0	0.0	0.00	USGS
1401	AEC757	BT-1309			0.060	0.002	0	30.0	0.87	USGS
1402	AEC878	BT-1312			0.100	0.003	0	30.0	0.87	USGS
1403	AEC729	BT-1339A			0.020	0.001	0	30.0	0.87	USGS
1404	AEC877	BT-1341			0.040	0.001	0	20.0	0.58	USGS
1405	AEC876	BT-1372			0.060	0.002	0	50.0	1.45	USGS
1406	AEC728	BT-1391A			0.080	0.002	0	50.0	1.45	USGS
1407	AEC875	BT-1391B			0.100	0.003	0	30.0	0.87	USGS
1408	AEC756	BT-1400A			0.040	0.001	0	150.0	4.35	USGS
1409	AEC700	BT-1400B			0.020	0.001	0	5.0	0.15	USGS
1410	AEC727	BT-1411A			0.020	0.001	0	20.0	0.58	USGS
1411	AEC785	BT-1411B			0.020	0.001	0	5.0	0.15	USGS
1412	AEC726	BT-1432A			0.040	0.001	0	30.0	0.87	USGS
1413	AEC784	BT-1432B			0.020	0.001	0	7.0	0.20	USGS
1414	AEC725	BT-1446A			0.040	0.001	0	50.0	1.45	USGS
1415	AEC783	BT-1446B			0.020	0.001	0	30.0	0.87	USGS
1416	AEC754	BT-1465A			0.020	0.001	0	10.0	0.29	USGS
1417	AEC874	BT-1465B			0.040	0.001	0	20.0	0.58	USGS
1418	AEC782	BT-1475			0.100	0.003	0	5.0	0.15	USGS
1419	AEC752	BT-1483A			0.020	0.001	0	15.0	0.44	USGS
1420	AEC753	BT-1483B			0.020	0.001	0	20.0	0.58	USGS
1421	AEC873	BT-1500			0.100	0.003	0	7.0	0.20	USGS
1422	AEC724	BT-1522			0.040	0.001	0	30.0	0.87	USGS
1423	AEC781	BT-1547			0.040	0.001	0	50.0	1.45	USGS
1424	AEC723	BT-1579A			0.060	0.002	0	30.0	0.87	USGS
1425	AEC872	BT-1579B			0.060	0.002	0	7.0	0.20	USGS
1426	AEC722	BT-1600A			0.060	0.002	0	50.0	1.45	USGS
1427	AEC780	BT-1600B			0.020	0.001	0	5.0	0.15	USGS
1428	AEC751	BT-1622A			0.040	0.001	0	10.0	0.29	USGS
1429	AEC721	BT-1640A			0.080	0.002	0	30.0	0.87	USGS
1430	AEC779	BT-1640B			0.060	0.002	0	5.0	0.15	USGS
1431	AEC851	BT-849B			0.020	0.001	0	5.0	0.15	USGS
1432	AEC455	GOOD SHAW #1			0.020	0.001		10.0	0.29	USGS
1433	AEC454	GOOD SHAW #2			0.200	0.006		70.0	2.03	USGS
1434	AEC890	H1			0.100	0.003	0	30.0	0.87	USGS
1435	AEC891	H2			0.003	0.000	100	0.0	0.00	USGS
1436	AEC892	H2A			0.900	0.026	0	30.0	0.87	USGS
1437	AEC802	LILAC			0.020	0.001	0	15.0	0.44	USGS
1438	AEC893	MCCLIN			8.000	0.232	0	30.0	0.87	USGS

APPENDIX 11A. GOLD AND SILVER ASSAYS										
BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
1439	AEC702	R008			0.001	0.000	50	15.0	0.44	USGS
1440	AEC707	R010			0.300	0.009	0	70.0	2.03	USGS
1441	AEC703	R031A			0.001	0.000	30	30.0	0.87	USGS
1442	AEC708	R031B			5.300	0.154	0	50.0	1.45	USGS
1443	AEC704	R065A			1.600	0.046	0	15.0	0.44	USGS
1444	AEC709	R069A			0.200	0.006	0	20.0	0.58	USGS
1445	AEC705	R075A			0.700	0.020	0	20.0	0.58	USGS
1446	AEC710	R075B			0.080	0.002	0	20.0	0.58	USGS
1447	AEC711	R080			0.020	0.001	0	100.0	2.90	USGS
1448	AEC716	RCD1A			5.900	0.171	0	20,000.0	580.00	USGS
1449	AEC717	RCD1C			3.100	0.090	0	20,000.0	580.00	USGS
1450	AEC718	RCD1D			0.100	0.003	0	100.0	2.90	USGS
1451	AEC720	RCD1E			0.020	0.001	0	30.0	0.87	USGS
1452	AEC719	RCD1F			0.020	0.001	0	50.0	1.45	USGS
1453	AEC706	RD20			0.900	0.026	15	20.0	0.58	USGS
1454	AEC807	S#1			0.020	0.001	0	30.0	0.87	USGS
1455	AEC659	UHDBDIA			0.020	0.001	0	20.0	0.58	USGS
1456	AEC666	VHOBDIB			0.100	0.003	0	30.0	0.58	USGS
1457	AEC808	W.S.#1			0.020	0.001	0	30.0	0.87	USGS
3301		3301		11		0.000		0.4	0.01	BLM
3302		3302		26		0.001		0.5	0.01	BLM
3303		3303		1797		0.052		4.4	0.13	BLM
3304		3304		55		0.002		0.1	0.00	BLM
3305		3305		142		0.004		1.1	0.03	BLM
3306		3306		354		0.010		0.1	0.00	BLM
3307		3307		2658		0.077		17.0	0.49	BLM
3308		3308		187		0.005		2.5	0.07	BLM
3310		3310		74		0.002		0.2	0.01	BLM
3311		3311		232		0.007		1.8	0.05	BLM
2312		2312		101		0.003		0.4	0.01	BLM
3313		3313		332		0.010		6.0	0.17	BLM
3314		3314		49		0.001		1.9	0.06	BLM
3315		3315		37		0.001		0.3	0.01	BLM
3316		3316		21		0.001		< .2	< .006	BLM
3317		3317		25		0.001		1.2	0.03	BLM
3318		3318		6		0.000		< .2	< .006	BLM
3319		3319		06		0.003		0.8	0.02	BLM
4000		BB2-35/39X		226		0.007		1.2	0.03	BLM
4001		BB2-46		17		0.000		0.3	0.01	BLM
4002		BB2-71		367		0.011		36.7	1.06	BLM
4003		BB2 95/112		6197		0.180		17.1	0.50	BLM
4004		BB2-127/133Y		16		0.000		0.5	0.01	BLM
4005		BB2-136/140		3432		0.100		7.9	0.23	BLM
4006		BB2-140/162Z		5044		0.146		3.2	0.09	BLM
4007		BB1-856/1270A		138		0.004		0.8	0.02	BLM
4008		BB1-169		28		0.001		4.4	0.13	BLM
4009		BB1-231		1519		0.044		24.1	0.70	BLM
4010		BB1-289.5		102		0.003		1.7	0.05	BLM
4011		BB3-143		>10000		26.700		23.7	0.69	BLM
4012		BB3-539		94		0.003		3.3	0.10	BLM
4013		BB3-92/93		>10000		29.900		38.9	1.13	BLM
4014		BB3-217		>10000		15.900		15.8	0.46	BLM
4015		BB3-273.5		442		0.013		2.0	0.06	BLM
4016		BB4-106		224		0.006		0.6	0.02	BLM
4017		BB4-154		92		0.003		0.3	0.01	BLM
4018		BB4-267		1792		0.052		9.9	0.29	BLM
4019		BB4-218		53		0.002		0.8	0.02	BLM
4020		BB4-503		306		0.009		2.9	0.08	BLM
4021		BB4-289		>10000		163.300		163.3	4.74	BLM

APPENDIX 11A. GOLD AND SILVER ASSAYS

BLM#	LAB#	FIELD #	Rock Type	AU(PPB) Fire Assay	AU(PPM) AA	AU(OPT)	Duplicate AU AA	AG(PPM)	AG(OPT)	SOURCE
4022		BB4-328		2728		0.079		5.7	0.17	BLM
4023		BB4-362		58		0.002		0.6	0.02	BLM
4024		BB4-383		492		0.014		2.3	0.07	BLM
4025		BB4-407.5/408		99		0.003		2.3	0.07	BLM

APPENDIX 11B:

BLM ANALYTICAL RESULTS

APPENDIX 11B. BLM ANALYTICAL RESULTS

BLM#	FIELD #	Collected by	Au30 (PPB)	Au (OPT)	Ag (PPM)	Cu (PPM)	Pb (PPM)	Zn (PPM)	Mo(PPM)	As (PPM)	Mn (PPM)
1	SHC-01	TS	487	0.0141	14.7	31	12	110	3	76	1208
2	SHC-02	TS	2801	0.0812	22.5	28	11	70	3	83	444
3	SHC-03	TS	1582	0.0459	6.5	25	13	73	4	122	612
4	SHC-04	TS	175	0.0051	5.5	32	12	83	3	42	692
5	SHC-05	GW JP JH	711	0.0206	10.3	37	13	120	3	68	1004
6	SHC-06	GW JP JH	100	0.0029	4.1	22	12	137	3	22	563
7	SHC-07	JH	873	0.0253	7.4	33	10	71	4	91	568
8	SHC-08	ML JP	136	0.0039	4.3	20	9	59	5	136	61
9	SHC-09	ML JP	6983	0.2025	33.7	20	12	35	4	85	44
10	SHC-10	ML	349	0.0101	5.3	17	9	41	4	126	39
11	SHC-11	ML GW	6684	0.1938	9.9	24	7	35	5	68	40
12	SHC-12	GW	>10000	0.3130	11.2	16	5	17	3	23	28
13	SHC-13	ML GW	538	0.0156	2.1	25	9	140	4	44	22
14	SHC-14	ML GW JP	678	0.0197	3.7	24	7	21	4	79	21
15	SHC-15	ML GW	246	0.0071	5.1	24	10	42	4	92	13
16	SHC-16	ML GW	243	0.0070	4.8	19	11	28	4	49	13
17	SHC-17	ML JP	1812	0.0525	9.2	18	15	28	3	63	86
18	SHC-18	ML JP	341	0.0099	2.9	17	14	41	5	226	368
19	SHC-19	ML JP	460	0.0133	2.2	29	15	71	4	131	412
20	SHC-20	GW	1260	0.0365	10	26	8	56	4	84	547
21	SHC-21	ML JP	2442	0.0708	173.2	12	4	13	2	22	318
22	SHC-22	ML JP	1718	0.0498	11.7	18	13	34	4	194	451
23	SHC-23	ML JP	435	0.0126	18.9	21	13	78	3	170	545
24	SHC-24	GW	1162	0.0337	2.7	20	9	61	3	61	360
25	SHC-25	ML JP	165	0.0048	1.4	23	9	68	3	195	374
26	SHC-26	GW	1238	0.0359	8.2	15	9	29	3	407	388
27	SHC-27	ML	4252	0.1233	27.9	10	5	16	2	49	252
28	SHC-28	ML JP	200	0.0058	1.5	18	12	45	4	154	205
29	SHC-29	ML JP	>10000	0.3360	42.9	15	6	15	6	101	98
30	SHC-30	ML JP	760	0.0220	2.7	9	13	10	3	115	8
31	SHC-31	ML JP	125	0.0036	1.5	11	10	7	9	86	10
32	SHC-32	ML JP	86	0.0025	12.3	23	15	40	5	110	17
33	SHC-33	ML JP	329	0.0095	12.7	13	15	25	13	175	19
34	SHC-34	ML JP	1641	0.0476	17.9	42	10	68	5	63	1070

APPENDIX 11B. BLM ANALYTICAL RESULTS											
BLM#	FIELD #	Collected by	Au30 (PPB)	Au (OPT)	Ag (PPM)	Cu (PPM)	Pb (PPM)	Zn (PPM)	Mo(PPM)	As (PPM)	Mn (PPM)
35	SHC-35	ML JP	4864	0.1411	23.4	18	10	37	7	22	1674
36	SHC-36	ML JP	336	0.0097	13.3	25	12	74	4	82	522
37	SHC-37	ML JP	962	0.0279	8.8	17	13	68	3	69	702
38	SHC-38			#NUM!							
39	SHC-39	ML JP	73	0.0021	0.7	21	14	65	3	66	719
40	SHC-40	ML JP	67	0.0019	0.4	18	8	27	5	31	130
41	SHC-41	ML JP	2975	0.0863	16.3	10	3	14	5	34	77
42	SHC-42	ML JP	2466	0.0715	16	14	8	30	4	246	90
43	SHC-43	ML JP	404	0.0117	5.8	15	12	50	3	49	387
44	SHC-44	TS CS	8431	0.2445	43.6	14	4	19	4	51	427
45	SHC-45	ML LV	414	0.0120	4.5	17	9	51	4	49	179
46	SHC-46	ML LV	182	0.0053	1.5	10	13	59	3	58	350
47	SHC-47	CS	75	0.0022	0.7	14	15	58	3	118	215
48	SHC-48	ML JP	1802	0.0523	3.5	9	10	38	2	111	192
49	SHC-49	ML JP	1108	0.0321	8.9	12	14	58	3	34	214
50	SHC-50	ML JP	1523	0.0442	11.2	15	10	54	2	23	196
51	SHC-51	ML CS	978	0.0284	6.7	19	11	59	2	11	208
52	SHC-52	ML CS	194	0.0056	1.4	13	14	45	3	14	246
53	SHC-53	JP GW	75	0.0022	0.6	12	15	15	3	43	20
54	SHC-54	JP GW	5366	0.1556	24.5	16	11	35	2	111	113
55	SHC-55	CS	>10000	0.5610	40.1	6	3	10	2	5	52
56	SHC-56	GW JP	79	0.0023	0.7	19	3	29	9	123	29
57	SHC-57	GW JP	23	0.0007	0.2	20	13	29	3	96	137
58	SHC-58	GW JP	75	0.0022	0.5	23	14	40	5	278	182
59	SHC-59	GW JP	149	0.0043	0.9	12	20	21	25	481	82
60	SHC-60	JP GW	965	0.0280	8.7	16	8	58	8	142	177
61	SHC-61	TS CS	239	0.0069	0.3	10	36	15	8	35	51
62	SHC-62	TS CS	25	0.0007	0.4	14	27	14	5	102	35
63	SHC-63	TS CS	31	0.0009	1.3	8	260	9	24	185	12
64	SHC-64	TS CS	21	0.0006	<.02	17	16	52	2	298	300
65	SHC-65	TS GW	39	0.0011	0.3	14	16	64	2	249	295
66	SHC-66	TS GW	25	0.0007	0.2	14	11	38	3	217	225
67	SHC-67	GW TS	372	0.0108	5.7	23	15	54	7	204	182
68	SHC-68	CS	44	0.0013	0.3	33	12	134	3	54	577

APPENDIX 11B. BLM ANALYTICAL RESULTS												
BLM#	FIELD #	Collected by	Au30 (PPB)	Au (OPT)	Ag (PPM)	Cu (PPM)	Pb (PPM)	Zn (PPM)	Mo(PPM)	As (PPM)	Mn (PPM)
69	SHC-69	TS GW	67	0.0019	0.4	15	9	30	4	101	97
70	SHC-70	TS GW	36	0.0010	0.4	13	9	37	2	196	185
71	SHC-71	TS GW	12	0.0003	<.2	30	10	47	2	87	382
72	SHC-72	TS GW	9	0.0003	<.2	29	8	39	3	164	575
73	SHC-73	GW TS	6	0.0002	<.2	28	8	53	4	<5	764
74	SHC-74	TS GW	52	0.0015	1.6	30	11	74	7	41	634
75	SHC-75	TS GW	9	0.0003	<.2	27	16	62	4	<5	654
76	SHC-76	TS GW	29	0.0008	0.8	25	12	47	6	45	179
77	SHC-77	TS GW	47	0.0014	10.3	16	12	21	7	43	143
78	SHC-78	TS GW	602	0.0175	3.5	22	12	70	4	38	362
79	SHC-79	TS GW	52	0.0015	0.7	16	13	58	5	20	309
80	SHC-80	TS GW	10	0.0003	<.2	17	17	62	3	<5	426
81	SHC-81	TS CS	121	0.0035	5.4	15	18	41	8	7	227
82	SHC-82	TS CS	41	0.0012	<.2	25	14	67	4	<5	819
83	SHC-83	TS CS	444	0.0129	6.7	34	13	73	7	50	477
84	SHC-84	TS CS	90	0.0026	1.6	22	12	45	4	32	363
85	SHC-85	ML LV	7	0.0002	<.2	27	6	60	3	<5	801
86	SHC-86	LV ML	119	0.0035	1.2	14	13	23	6	7	32
87	SHC-87	LV ML	20	0.0006	0.9	21	18	52	4	<5	433
88	SHC-88	ML LV	16	0.0005	0.3	20	18	22	6	<5	22
89	SHC-89	ML LV	29	0.0008	0.9	29	13	31	6	9	33
90	SHC-90	LV ML	86	0.0025	2.3	8	17	19	4	220	34
91	SHHG-1	TS	2843	0.0824	4.7	7	3	12	2	5	107
	SHC-2		2801	0.0812	22.5	28	11	70	3	83	444
	DUPLICATE		3150	0.0914	22	29	13	75	3	85	472
	SHC-20		1260	0.0365	10	26	8	56	4	84	547
	DUPLICATE			0.0000	11.1	25	8	58	4	86	569
				0.0000							
	SHC-25		165	0.0048	1.4	23	9	68	3	195	374
	DUPLICATE		193	0.0056							
				0.0000							

APPENDIX 11B. BLM ANALYTICAL RESULTS											
BLM#	FIELD #	Collected by	Au30 (PPB)	Au (OPT)	Ag (PPM)	Cu (PPM)	Pb (PPM)	Zn (PPM)	Mo(PPM)	As (PPM)	Mn (PPM)
	SHC-31		67	0.0019	1.5	11	10	7	9	86	10
	DUPLICATE*			0.0000	1.5	11	9	7	9	87	11
				0.0000							
	SHC-40		1802	0.0523	0.4	18	8	27	5	31	130
	DUPLICATE		1674	0.0485	0.5	19	10	29	5	34	134
				0.0000							
	SHC-48		79	0.0023	3.5	9	10	38	2	111	192
	DUPLICATE			0.0000							
				0.0000							
	SHC-56		39	0.0011	0.7	19	9	29	9	123	29
	DUPLICATE		37	0.0011	0.8	19	10	31	10	127	30
				0.0000							
	SHC-65		12	0.0003	0.3	14	16	64	2	249	295
	DUPLICATE*		7	0.0002	<.2	14	15	60	3	241	278
				0.0000							
	SHC-71		29	0.0008	<.2	30	10	47	2	87	382
	DUPLICATE			0.0000							
				0.0000							
	SHC-76		29	0.0008	0.8	25	12	47	6	45	179
	DUPLICATE		32	0.0009	0.8	24	13	47	6	46	179
				0.0000							
	SHC-89		29	0.0008	0.9	29	13	31	6	9	33
	DUPLICATE*		32	0.0009	0.8	28	12	29	5	11	31
											Hg
92	M-1	GW	13	0.0004	<.2	20	20	63	<1	10	0.308
93	PW-1	GW	3436	0.0996	22.7	11	7	41	1	12	0.354
94	PW-2	GW	3093	0.0897	16.8	15	8	41	<1	27	0.393
95	PW-3	GW	3185	0.0924	21.2	21	10	45	<1	70	0.581
96	PW-4	GW	1016	0.0295	5.3	7	9	20	1	172	0.318
97	PW-5	GW	820	0.0238	8.8	10	8	51	<1	55	0.631
98	S-1	GW	483	0.0140	>200	75	95	75	44	68	0.300
99	WR-7-1	GW	384	0.0111	3.2	15	13	16	2	117	0.381
100	WR-7W-2	GW	5238	0.1519	>200	10	<2	6	2	9	0.156
101	WRMD	GW	401	0.0116	54.9	15	122	355	27	139	0.504

APPENDIX 11B. BLM ANALYTICAL RESULTS											
BLM#	FIELD #	Collected by	Au30 (PPB)	Au (OPT)	Ag (PPM)	Cu (PPM)	Pb (PPM)	Zn (PPM)	Mo(PPM)	As (PPM)	Mn (PPM)
	Parker Whitney Stockpile		0.0778	oz Au/ton							
	acres	43560.00	1.00								
	sq. feet	43560.00									
	ave. thickness	15.00									
	cubic feet	653400.00									
	cubic yards	24200.00									
	lbs	6.49E+07									
	tons	32428.00	2523	oz Au							

APPENDIX 11C:

HERRERA ANALYTICAL RESULTS

APPENDIX 11C HERRERA ANALYTICAL RESULTS

ELEV	BLM #	SAMPLE #	TYPE	Au	Hg	As	Zn	Ag	Sb	Tl
			ROCK	PPM	PPM	PPM	PPM	PPM	PPM	PPM
8380	300	FS-001	UDG	0.03	0.08	2	165	0.9	4	0.2
8380	301	FS-002	UBZ	0.02	0.04	15	45	0.45	1	0.2
8380	302	FS-002SD	UBZ	0.02	0.06	10	35	0.7	2	0.1
8965	303	FS-003	SBAF	0.02	0.12	130	5	0.03	20	0.9
8965	304	FS-003X	ABSF	0.02	0.1	220	2	0.05	6	1.8
8920	305	FS-004	SLCJ	0.05	0.01	450	2	0.1	52	1.3
8960	306	FS-005	SLAF	0.02	0.7	330	2	0.15	82	1.6
8950	307	FS-006	SLPA	0.02	0.06	30	2	0.02	18	0.3
8950	308	FS-006SC	SLA	0.02	0.02	5	2	0.02	4	0.1
8340	309	FS-007M	JNYA	0.02	0.04	65	5	0.5	16	8.7
8340	310	FS-007D	HDAF	0.02	0.04	25	10	0.5	24	17.4
8390	311	FS-008	HDQ	0.03	0.14	100	30	0.5	190	15.9
8480	312	FS-009V	V-F	0.3	0.14	180	25	0.6	1200	4.2
8480	313	FS-009D	HDAO	0.03	0.24	220	25	0.6	820	20.1
8485	314	FS-010	V-QF	0.2	0.3	200	15	0.8	60	1.2
8505	315	FS-OIIH	V-JF	0.3	0.36	65	10	0.85	120	0.6
8505	316	FS-011V	VWPA	0.5	2.2	320	5	2.7	40	1.2
8510	317	FS-012	KWTH	0.03	0.54	260	5	0.8	10	10.8
8510	318	FS-012SD	KWTH	0.05	0.4	290	3	1	8	9.3
8460	319	FS-013	HDAF	0.03	0.28	340	10	0.1	15	18.1
8460	320	FS-013DX	VDCE	0.1	0.54	500	10	0.8	50	3
8480	321	FS-014	VWHA	0.4	1.3	370	5	1.9	60	2.3
8480	322	FS-015	VWHA	0.2	0.24	380	5	1.2	1	1.1
8450	323	FS-016	V-JR	0.45	0.04	800	65	0.3	870	3.8
8410	324	FS-017	HBEA	0.02	0.2	30	25	0.1	20	14.7
8395	325	FS-018HR	HDQA	0.03	0.1	25	15	0.6	10	18.1
8395	326	FS-018BX	HBVA	0.5	0.58	270	10	0.9	120	11.8
8340	327	FS-019	HBAJ	0.02	0.08	200	10	0.7	450	15.5
8355	328	FS-020	HBAJ	0.02	0.36	150	20	0.1	40	13
8350	329	FS-021	HOIA	0.02	0.02	2	10	0.5	1	11.6
8450	330	FS-022	V-JR	2.6	0.01	1000	65	2.3	1220	14
8470	331	FS-023	KWTH	0.05	0.04	50	5	0.55	18	12.8
8470	332	FS-023B	HDAF	0.02	0.04	25	30	0.5	20	15.4
8490	333	FS-024X	HWYF	0.02	0.1	110	15	0.15	12	8.3
8500	334	FS-025	KWTH	0.03	0.2	320	5	0.7	14	12.2
8500	335	FS-026	HBTA	0.02	0.44	210	3	0.8	12	13
8500	336	FS-026SD	HBTA	0.02	0.64	160	3	0.8	10	11.3
8490	337	FS-027	V-PQ	2.5	0.28	390	3	8.5	50	10.6
8470	338	FS-028	HBAY	0.02	0.16	400	10	0.95	12	14
8600	339	FS-029	HWAI	0.05	0.01	100	20	0.7	4	14.5
8620	340	FS-030	HBEY	0.03	0.02	200	3	0.3	20	12
8620	341	FS-030HV	lps	0.75	0.3	900	10	6.9	74	0.9
8620	342	FS-030X	HBAY	0.02	0.02	65	2	10	1	9.2
8620	343	FS-031	HBCA	0.02	0.1	85	5	0.15	18	8.4
8630	344	FS-032	HBCA	0.02	0.08	160	3	0.55	4	10.4
8580	345	FS-033	HDIA	0.03	0.04	40	40	0.6	12	13.2
8595	346	FS-034	V-R	1	0.08	270	40	3	14	2
8600	347	FS-035	VWJF	2.2	0.08	120	35	29.5	20	3.5
8615	348	FS-036	VWQF	2.6	0.1	290	10	2.2	20	1.4
8620	349	FS-037	HWAF	0.03	0.01	60	15	0.65	2	5
8670	350	FS-038	HBEC	0.02	0.04	50	25	0.05	45	11
8670	351	FS-038AC	HDEQ	0.02	0.14	25	15	0.03	115	11
8660	352	FS-039	HBEA	0.02	0.12	10	20	0.03	54	10

APPENDIX 11C HERRERA ANALYTICAL RESULTS										
ELEV	BLM #	SAMPLE #	TYPE	Au	Hg	As	Zn	Ag	Sb	Tl
			ROCK	PPM	PPM	PPM	PPM	PPM	PPM	PPM
8680	353	FS-040	ABHF	0.05	0.12	210	20	0.65	10	8.5
8680	354	FS-040SD	ABHI	0.15	1.1	170	15	11	6	4.2
8720	355	FS-041	HDAI	0.05	0.02	20	45	0.1	28	9.1
8715	356	FS-042M	HNJ	0.02	0.06	5	10	0.03	5	5
8715	357	FS-042B	HBIA	0.02	0.01	10	35	0.05	6	7
8715	358	FS-043	V-F	1.5	0.06	25	5	3.4	2	2.1
8705	359	FS-044D	HDAF	0.02	0.06	250	5	0.55	8	10.8
8705	360	FS-044E	HBAF	0.02	0.26	380	10	0.7	16	8.5
8700	361	FS-045	HDA	0.02	0.01	5	15	0.5	14	4.4
8730	362	FS-046	HBY	0.02	0.01	30	25	0.4	22	13.6
8730	363	FS-047X	HDY	0.02	0.02	35	20	0.05	25	3.7
8730	364	FS-047D	HDY	0.02	0.01	5	30	0.5	20	15.5
8770	365	FS-048FW	HBAY	0.03	0.12	20	0.3	0.3	2	10
8770	366	FS-048HW	HBAF	0.02	0.08	65	15	0.3	20	9.3
8770	367	FS-048V	VWAF	0.03	0.02	35	10	0.05	6	0.3
8770	368	FS-049	HBCF	0.03	0.02	180	3	0.45	6	11.7
8930	369	FS-050	ABYF	0.02	0.02	20	3	0.75	2	1.8
8945	370	FS-051x	ABYF	0.02	0.01	50	10	0.45	4	3.6
8945	371	FS-051SD	ADYF	0.02	0.01	50	10	0.5	20	3.7
8940	372	FS-052	V-F	1.8	0.04	5	2	7	4	1.7
8935	373	FS-053	VWFY	0.55	0.04	10	5	4	2	2.3
8935	374	FS-054	V-F	0.5	0.02	20	5	11.7		1.6
8935	375	FS-055	VWYA	3.1	0.14	20	5	33	62	4.4
8935	376	FS-056	V-PF	3.5	0.02	10	5	49	6	3.1
8935	377	FS-057	VWPI	21	0.02	30	3	230	4	3.6
8930	378	FS-058	VWKF	1.5	0.12	35	10	5.7	10	3.5
8890	379	FS-059	KBAI	0.03	0.06	2	65	0.6	10	4.2
8885	380	FS-060	V-F	14.5	4.9	10	2	45	8	2.1
8885	381	FS-061	KBTI	0.02	0.2	25	40	1.6	20	5.2
8885	382	FS-062	KWTA	0.05	0.46	230	3	3.5	18	4.7
8910	383	FS-063	V-F	7.6	0.1	3	2	60	6	2.5
8915	384	FS-064	KWTF	0.02	0.06	0	5	1.1	12	6
8920	385	FS-065	KBQI	0.02	0.02	65	5	0.6	40	6.3
8920	386	FS-066	KDQI	0.03	0.04	10	75	0.6	10	5
8920	387	FS-067	KBMI	0.02	0.06	160	60	0.8	0	5.4
8905	388	FS-068	V-F	4.7	2.6	5	2	26.5	4	1.5
8980	389	FS-069	ABKX	0.02	0.04	35	5	0.2	24	4
8995	390	FS-070	KWAJ	0.2	0.02	25	15	1.1	44	4.3
9000	391	FS-071	V-F	0.1	0.1	5	2	4.2	1	3.5
8995	392	FS-072	KDIF	0.03	0.01	30	50	0.7	28	5.6
8995	393	FS-073	KBQA	0.02	0.02	60	30	0.7	132	2.6
9000	394	FS-074	V-PF	11	0.1	10	5	85.5	1	5.4
8990	395	FS-075	KWAI	0.1	0.06	130	25	3.1	12	5
8980	396	FS-076	V-F	7.4	0.12	20	5	48.5	4	2
8975	397	FS-077	KBAX	0.02	0.06	5	3	0.9	52	3.5
8970	398	FS-078	VWF	2.4	0.12	10	2	20.5	8	1.6
8975	399	FS-079	VWF	2	0.2	20	15	14	4	2.9
8980	400	FS-080	V-F	1.5	0.02	3	3	12	2	1
8915	401	FS-081	V-PF	10.5	0.5	15	5	10.7	12	1.6
8915	402	FS-082	KWBI	0.1	0.02	30	65	23	12	5.6
8915	403	FS-083	KBCY	0.1	0.01	10	35	2.3	16	6.1
8900	404	FS-084	KBCY	0.02	0.01	40	50	0.55	2	6.5
8900	405	FS-084SD	KBCY	0.15	0.02	60	50	1.2	4	5.1
8890	406	FS-085	KBFY	0.1	0.01	90	35	1.2	4	5

APPENDIX 11C HERRERA ANALYTICAL RESULTS										
ELEV	BLM #	SAMPLE #	TYPE	Au	Hg	As	Zn	Ag	Sb	Tl
			ROCK	PPM	PPM	PPM	PPM	PPM	PPM	PPM
8895	407	FS-086	KWBF	5.8	0.01	150	40	12.7	10	5
8840	408	FS-087	KDIQ	0.02	0.02	2	40	0.5	20	9.3
8810	409	FS-088	KDTI	0.05	0.04	20	25	1.6	32	2.3
8810	410	FS-088SD	KDTI	0.15	0.01	10	20	3	38	2.7
8910	411	FS-089	KBYI	0.1	0.04	25	35	0.8	6	2.2
8910	412	FS-090	KWBA	2.1	0.04	20	50	67	8	2.9
8965	413	FS-091B	KBYA	0.05	0.16	50	20	1.3	2	5
8965	414	FS-091D	KDYA	0.03	0.06	40	55	0.9	10	7.6
8750	415	FS-092	KDIG	0.03	0.02	5	20	0.6	4	2.2
8770	416	FS-093	KWIG	0.15	0.01	5	30	28	2	1.9
8800	417	FS-094	KDIG	0.02	0.02	5	25	0.7	4	1.9
8790	418	FS-095	KDIG	0.03	0.01	15	25	0.6	6	2.4
8775	419	FS-096	KDTA	0.02	0.01	5	20	0.6	2	3.2
8765	420	FS-097	KDT	0.02	0.02	15	40	0.9	4	3.3
8815	421	FS-098	KDTG	1.9	0.04	5	30	7.8	2	2.1
8815	422	FS-098V	V-F	3.3	0.02	2	3	2	1	0.7
8840	423	FS-099	KDTF	0.03	0.01	10	30	0.9	4	2.6
8845	424	FS-100	V-F	40	0.1	55	15	72	10	3
8870	425	FS-101	KDIT	0.03	0.01	10	35	0.75	10	3.6
8830	426	FS-102	KDTI	0.02	0.02	10	25	1.4	4	2.2
8905	427	FS-103	KBTQ	0.05	0.04	35	15	0.8	18	6.4
8970	428	FS-104	KBTM	0.02	0.02	100	45	0.95	14	5.5
8975	429	FS-105	KDTV	0.55	0.02	25	55	1.4	6	4
8940	430	FS-106	KDTV	0.02	0.01	30	50	0.6	2	1.9
8870	431	FS-107	KDTG	0.02	0.02	2	35	0.55	6	2.4
8870	432	FS-107SD	KDTG	0.02	0.02	15	25	0.7	4	2
8835	433	FS-108	VWF	12	0.02	3	3	62	1	1
8815	434	FS-109	KDTI	0.02	0.02	5	20	0.7	4	3.1
8810	435	FS-110	KDYG	0.03	0.04	40	40	0.85	10	3.6
8805	436	FS-111	KBYG	0.05	0.01	75	25	0.7	4	3
8900	437	FS-112	V-FM	0.2	0.02	5	5	72	2	4.8
8900	438	FS-113	KWTG	0.2	0.02	30	35	9.4	4	4.6
8930	439	FS-114	KDTQ	0.15	0.01	25	90	0.6	10	3.1
8965	440	FS-115	KDYF	0.03	0.01	20	70	0.85	4	6.1
8985	441	FS-116V	V-M	3.8	0.01	2	2	8.5	1	0.4
8985	442	FS-116H	KDMY	0.25	0.01	50	60	4.2	18	6.2
-----	443	FS-117A	V-P	28.5	0.18	3	3	73	2	2.7
-----	444	FS-117C	V-F	10.5	0.18	10	5	42	6	1.1
-----	445	FS-118	VWF	10.3	0.2	25	40	3.2	12	4.2
-----	446	FS-119	KWBF	0.15	0.01	5	45	0.65	14	6.5
-----	447	FS-120	KDYI	0.03	0.02	5	40	5.5	14	3.8
-----	448	FS-120X	KDYF	0.05	0.08	140	20	2.5	14	7.6
8910	449	FS-121	VWFA	1.4	0.02	5	5	10.8	2	1.5
8845	450	FS-122	KDTG	0.02	0.01	10	40	0.6	8	10
8845	451	FS-122X	KDTF	0.03	0.06	180	50	0.8	6	4.5
8810	452	FS-123	KDYF	0.05	0.02	2	45	1.8	6	4
8830	453	FS-124	KDTG	0.1	0.06	2	20	1.1	6	7.5
8875	454	FS-125	KDTF	35	0.12	25	10	3	12	7.4
8905	455	FS-126	KDTF	0.03	0.01	10	65	1	4	10.4
8905	456	FS-127	KBYC	0.02	0.04	15	20	1	6	4.1
8905	457	FS-128B	KBAF	0.02	0.04	60	20	0.5	1	4.5
8905	458	FS-128	KDAX	0.02	0.04	110	2	0.25	2	4
8910	459	FS-129	KBAF	0.02	0.08	160	90	1.3	4	4.8
8935	460	FS-130	KDXF	0.05	0.04	150	2	0.35	8	3

APPENDIX 11C HERRERA ANALYTICAL RESULTS										
ELEV	BLM #	SAMPLE #	TYPE	Au	Hg	As	Zn	Ag	Sb	Tl
			ROCK	PPM	PPM	PPM	PPM	PPM	PPM	PPM
6935	461	FS-130x	KDAF	0.02	0.06	85	5	0.25	2	3.8
8935	462	FS-130Y	KLAF	0.02	0.02	220	20	0.9	4	3.8
8740	463	FS-131	SLPF	0.02	0.01	5	2	1.6	1	0.1
8905	464	FS-132	SBIA	0.05	0.1	70	10	6.4	100	2.8
8925	465	FS-133	SLAF	0.02	0.44	45	2	0.05	10	0.6
8935	466	FS-134	SLAF	0.02	0.16	490	2	0.05	100	1
8910	467	FS-135	VLSA	0.35	0.18	5	2	4	2	0.8
8950	468	FS-136	SLVQ	0.3	0.12	20	2	0.02	10	4
8950	469	FS-137	SLAF	0.02	0.01	60	5	0.05	1	3.6
8950	470	FS-138	SLPF	0.02	1.4	490	3	0.2	140	1
8950	471	FS-139	SLPQ	0.02	0.08	30	2	0.03	20	0.4
8980	472	FS-140	SBJV	0.05	0.01	20	3	0.7	400	0.2
8960	473	FS-141	V-SF	9.3	0.06	45	5	42	12	4.6
8960	474	FS-142	ADKS	0.05	0.18	95	5	0.32	1	3.8
8960	475	FS-143	SDAF	0.02	0.1	35	10	0.35	12	3
-----	476	FS-144	KDIA	0.02	0.1	20	45	0.9	2	3.6
-----	477	FS-145	KDI	0.02	0.14	5	65	0.65	1	0.4
-----	478	FS-146	KDI	0.02	0.01	5	35	0.65	1	0.4
-----	479	PS-147	KDIA	0.03	0.02	5	35	0.65	1	6.7
------	480	FS-148	KDIY	0.02	0.04	10	15	0.5	48	3
------	481	FS-149	KDTI	0.02	0.02	2	45	0.6	1	0.2
8935	482	FS-151	KBYA	0.05	0.06	75	45	7.7	100	2.8
8935	483	FS-152	KDYA	0.02	0.02	20	45	1.7	4	4
8935	484	FS-153	V-F	8.2	0.01	10	2	100	2	2.9
	485									
	486									
	487									
8980	488	EBBAX01	ABSI	0.05	0.06	80	2	1.5	4	8
8980	489	EBBAX02	KBAF	0.05	0.02	55	75	1	80	5.2
8980	490	EBBAX03	KBAF	0.02	0.01	60	50	5	30	5.8
8320	491	EBBAX04	HBQA	0.02	0.08	40	20	0.5	150	16
8350	492	EBBAX5M	HJNR	0.02	0.08	110	15	0.4	72	12
8350	493	EBBAX5H	HDQA	0.02	0.02	150	15	0.5	50	16
8605	494	EBBAX06	HBCE	0.02	0.02	40	20	0.2	76	9.8
8905	495	EBBAX07	AWYI	0.25	0.3	350	2	2	32	8.8
8520	496	EBBAX08	ADKF	0.2	0.02	65	20	2	2	9.2
8925	497	EBBAX9V	V-F	0.35	0.06	5	2	50	8	2.2
8925	498	EBBAX9W	KBAY	0.05	0.06	200	10	20	38	2.8
8925	499	EBBAX9B	KBAY	0.5	0.02	140	2	7	80	2.4
8920	500	EBBAX10	KDTF	0.05	0.04	210	30	0.5	8	4.2
8935	501	EBBAX11	SLA	0.02	0.24	90	2	0.2	8	0.4
8940	502	EBBAX12	SLAP	0.05	0.38	230	2	1	50	0.6
8920	503	EBBAX13B	SLP	0.02	0.1	75	2	0.2	28	1
8920	504	EBBAX13C	KBSF	0.03	0.02	65	50	1	22	3.6
8895	505	EBBAX14	KBTM	0.02	0.02	200	140	0.2	1000	5
8910	506	EBBAX15A	VWAF	0.6	0.3	90	2	20	8	2.8
8910	507	EBBAX15B	AWYF	0.05	0.02	75	3	2.00	4	3.0
8910	508	EBBAX15C	AWYF	0.05	0.01	70	3	2.00	2	4.0
8890	509	EBBAX16V	V-F	1.40	0.01	5	2	30.00	2	1.4
8890	510	EBBAX16H	KBTNI	0.15	0.02	85	20	5.00	78	4.4
8890	511	EBBAX16F	KBYM	0.02	0.02	55	20	5.00	38	3.4
8890	512	EBBAX17	KDTF	0.03	0.02	55	40	1.00	12	4.8
8975	513	EBBAX18A	ADKF	0.05	0.04	70	40	2.00	12	2.4
8975	514	EBBAX18B	ADKF	0.05	0.02	120	75	2.00	4	2.8

APPENDIX 11C HERRERA ANALYTICAL RESULTS										
ELEV	BLM #	SAMPLE #	TYPE	Au	Hg	As	Zn	Ag	Sb	Tl
			ROCK	PPM	PPM	PPM	PPM	PPM	PPM	PPM
8985	515	EBBAX19A	VBA5	0.02	0.02	100	5	2.00	22	2.2
8985	516	EBBAX19B	VBAS	0.02	0.02	120	5	0.70	8	3.2
8910	517	EBBAX20	KBIT	0.02	0.02	70	50	0.40	210	5.4
8925	518	EBBAX21A	KBMY	0.05	0.02	45	25	2.00	28	4.6
8925	519	EBBAX21B	VBM	3.90	0.01	45	2	30.00	6	1.8
9000	520	EBBAX22	VWYIA	0.20	0.01	90	2	10.00	4	1.8
8720	521	EBBAX23C	HBNAF	0.02	0.01	25	35	0.70	6	9.2
8705	522	EBBAX24	HBNAF	0.02	0.01	50	35	0.20	6	7.2
8620	523	EBBAX25	HDEQ	0.02	0.02	30	20	0.20	150	9.2
8975	524	BB-7A	V-P	2.70	0.08	10	10	100.0	2	2.2
8400	525	BCC1FW	KDIPY	0.10	0.10	180	50	8.20	2	1.3
8400	526	BCC1HW	KDIY	0.20	0.04	10	100	0.15	2	0.8
8400	527	BCC1V	VWFM	0.15	0.30	60	20	2.70	8	11.3
8400	528	BCC2HW	KDPFY	0.25	0.48	180	40	22.80	14	3.6
8400	529	BCC2V	V-Z	4.80	0.36	10	55	7.00	1	3.6
8400	530	BCC3FW	KDPIY	0.20	0.50	90	80	1.90	8	2.5
8400	531	BCC3HW	KDIY	0.02	0.16	10	110	0.02	8	1.6
8400	532	BCC3V	V-ZF	2.90	0.74	25	5	7.00	1	2.4
8400	533	BCC4HW	KDIYF	0.05	0.54	100	200	0.90	20	1.7
8400	534	BCC4V	V-F	1.00	0.44	160	70	2.00	50	12.3
8400	535	BCC5FW	KDYFI	0.10	0.66	100	100	5.20	8	2.2
8400	536	BCC5HW	KDPIF	0.30	0.28	210	120	30.40	50	2.8
8400	537	BCC5V	V-RF	11.30	0.24	390	70	12.70	70	8.8
8400	538	BCC6HW	KBYIP	0.05	0.10	75	120	2.80	4	3.3
8400	539	BCC6V	V-F	0.50	0.08	45	5	0.50	4	8.4
8400	540	BCC7HW	KDYIF	0.75	0.24	120	75	1.00	10	2.4
8400	541	BCC7V	V-F	0.30	0.36	120	20	0.80	6	6.0
8400	542	BCC8HW	KBYIF	0.02	0.50	10	200	0.10	2	2.0
8400	543	BCC8V	V-F	0.20	0.52	100	15	0.02	2	4.6
	544	no sample								
	545	no sample								
	546	no sample								
8400	547	BCC9HW	KDYIP	0.3	0.4	160	60	1.3	1	2.2
8400	548	BCC9V	V-F	0.05	0.28	40	50	1.2	10	15
8400	549	BCC10HW	KBIY	0.02	0.06	30	120	7	6	1.7
8400	550	BCC10V	V-FM	0.1	0.14	20	15	0.02	1	5.5
8400	551	BCC11FW	KBIY	0.1	0.84	25	90	0.02	2	2.5
8400	552	BCC11HW	KDAI	0.05	0.34	70	60	14.5	4	2.6
8400	553	BCC11V	V-FM	0.6	1.1	25	2	0.35	1	4.8
8400	554	BCC12HW	KDAI	0.05	0.18	65	30	46.6	2	2.8
8400	555	BCC12V	V-FM	0.35	0.94	15	2	0.02	1	9
8400	556	BCC13FW	KWYI	1.1	0.2	75	45	2	2	1.8
8400	557	BCC13HW	KBAYI	0.5	0.12	80	20	4.5	1	2
8400	558	BCC13V	V-MF	0.3	0.6	60	10	0.4	1	9.7
8400	559	BCC14HW	KBIY	0.05	0.3	20	90	1.5	4	1.8
8400	560	BCC14V	V-F ~	0.05	0.22	140	15	0.02	14	7.3
8400	561	BCC15HW	KDIF	0.1	0.38	50	45	0.02	6	1.5
8400	562	BCC15V	V-FM	0.55	1.2	95	30	3.5	4	9.7
8400	563	BCC16HW	KDIFY	0.02	0.48	160	70	1.2	14	1.7
8400	564	BCC16V	V-FM	0.05	0.66	40	10	2.5	1	10.1
8400	565	BCC17HW	KDIF	0.02	0.42	170	50	1.8	24	1.4
8400	566	BCC17V	V-F	0.05	0.64	20	10	9	1	10.9
8400	567	BCC18HW	KDIF	0.15	0.84	35	95	3.5	4	2.2
8400	568	BCC18V	V-F	0.1	0.2	430	40	0.45	24	8.9

APPENDIX 11C HERRERA ANALYTICAL RESULTS										
ELEV	BLM #	SAMPLE #	TYPE	Au	Hg	As	Zn	Ag	Sb	Tl
			ROCK	PPM	PPM	PPM	PPM	PPM	PPM	PPM
8400	569	BCC19HW	KDIF	0.05	0.76	70	90	4.8	12	2.1
8400	570	BCC19V	V-FR	7.5	0.88	230	40	46.6	42	3.7
8400	571	BCC20HW	KDIY	0.05	0.96	160	50	0.35	1	2.6
8400	572	BCC20V	V-F	8.5	0.26	30	10	13	1	5.6
8400	573	BCC21HW	KDIYF	0.02	0.82	25	90	6.3	8	2.1
8400	574	BCC21V	V-FM	0.2	1.2	170	20	1.5	6	7.2
8400	575	BCC22HW	KDIY	0.02	1.5	25	-60	0.35	2	2.4
8400	576	BCC22V	V-FM	0.1	0.54	100	20	2	20	6.9
8400	577	BCC23HW	KDIF	0.05	0.88	130	80	12.5	12	4.3
8400	578	BCC23V	V-R	0.1	0.74	360	65	0.7	180	7.1
8400	579	BCC24HW	KDIF	0.05	1.5	5	70	0.05	1	1.8
8400	580	BCC24V	V-F	5.3	0.36	55	20	14	10	4.4
8400	581	BT1140	KBAI	0.05	0.7	30	10	0.4	2	1.9
8400	582	BB-4	KBIA	0.05	0.84	35	55	0.4	4	1.4
8400	583	BB-5	KBI1	0.02	0.4	15	50	0.2	18	0.6
8400	584	BB-6A	V-FR	1.7	0.46	90	30	2	8	7.2
8400	585	BB-6BFW	KDAF	0.05	0.54	70	100	1	8	2
8400	586	BB-6CFW	KDYPI	0.05	0.54	30	85	1	2	1.8
8400	587	BB-6DFW	KDI1	0.05	0.2	10	60	0.2	6	1.6
8400	588	BB-6EFW	KDIY	0.05	0.34	15	55	0.2	6	1.6
8400	589	BB-6FFW	KDI1Q	0.02	0.5	15	50	0.2	8	1.6
8400	590	BB-6GFW	KDI1Q	0.03	2.3	15	50	0.2	8	1.8
8400	591	BB-6HFW	KDIYQ	0.03	2	20	60	0.2	8	1.4
8400	592	BB-6IFW	KDIY	0.03	0.56	20	55	0.2	6	1.4
8400	593	BE-6QHW	KWYP	15	0.6	160	65	20	8	2.4
8400	594	BB-6RHW	KDYI	0.02	0.6	15	190	0.4	6	1.2
8400	595	BB-6JHW	KDYI	0.02	0.16	10	130	0.5	6	1.2
8400	596	BB-6KHW	KDYI	0.03	0.22	10	160	0.2	6	1
8400	597	BB-6LHW	KDYI	0.03	0.38	10	170	0.5	6	1.2
8400	598	BB-6MHW	KDYQ	0.05	0.12	20	200	0.2	8	1.2
8400	599	BB-6NHW	KDYI	0.03	1.7	15	190	0.4	6	1.2
8400	600	BB-6OHW	KDYIF	0.05	1.2	15	160	0.5	10	1.6
8400	601	BB-6PHW	KDYI	0.02	2.5	5	170	0.5	6	1.4
8400	602	BB-6	V-R	0.75	1.7	480	100	1	70	3.2
8575	603	NSX-1	KDTA	0.1	0.44	800	2	0.9	20	15.8
8575	604	NSY-1	KWTIA	0.35	1.6	1700	2	7	35	11.6
8575	605	NSX-2	KDTAI	0.1	0.58	1300	2	1	28	13.8
8575	606	NSX-3	KDTAF	0.65	4.5	1500	2	8.4	85	10.7
8575	607	NSX-4	KDTAI	0.1	1.1	2100	2	2.5	20	14.8
8575	608	NSY-4	KWAIP	0.15	2.3	400	2	3.3	14	15.7
8575	609	NSX-5	KWTF	0.2	4.5	450	2	6.3	26	14.5
8575	610	NSX-6	KDTA	0.2	1.3	270	2	3	8	19.2
8575	611	NSX-7	KDTP	0.55	0.76	1000	2	3.2	26	31
8575	612	NSX-8	KDAI	0.05	0.18	500	2	2.5	18	12.2
8575	613	NSX-9	V-R	2.1	0.26	2100	20	0.7	28	8.7
8575	614	NSY-9	KWTPA	0.3	1.3	440	10	5.4	18	15.3
8575	615	NSX-10	V-FP	0.1	0.42	1200	90	0.6	16	2.3
8575	616	NSY-10	KDAI	0.02	1.2	300	10	2.4	8	11.6
8575	617	NSX-11	KDAFT	0.05	0.2	330	20	1	18	12.5
8575	618	NSY-11	V-R	0.5	0.16	2100	45	1.3	50	6
8575	619	NSX-12	KDAF	0.02	0.14	340	2	3	6	6
8610	620	WH-3A	KBYI	0.03	0.18	45	50	0.4	64	2.8
8610	621	WH-3B	KBYI	0.1	0.26	55	65	2.4	30	2.8
8610	622	WH-3C	V-F	0.05	0.14	2	2	0.02	2	0.1

APPENDIX 11C HERRERA ANALYTICAL RESULTS										
ELEV	BLM #	SAMPLE #	TYPE	Au	Hg	As	Zn	Ag	Sb	Tl
			ROCK	PPM	PPM	PPM	PPM	PPM	PPM	PPM
8610	623	WH-3D	KDYI	0.02	0.64	20	55	0.05	42	3.2
8610	624	WH-4AHQ	VBY	0.1	0.22	40	20	0.95	160	0.1
8610	625	WH-5	IDAK	0.03	0.02	70	30	0.05	2	1.8
8610	626	WH-6	KBY	0.03	0.66	15	75	0.7	32	4.4
8610	627	WH-8	IDQ	0.02	0.01	50	50	0.02	6	2.4
8610	628	WH-9AB	IOE	0.02	0.01	10	35	0.03	2	1
8610	629	WH-10B	IOCE	0.02	0.02	20	40	0.02	2	1.2
8610	630	WH-1V	V-AQ	0.5	0.46	50	5	0.6	14	2.5
8610	631	WH-1HA	KWIYF	0.45	0.66	15	30	1.5	24	3.2
8610	632	WH-1HB	KDIAF	0.05	0.28	20	55	0.4	26	3.1
8610	633	WH-1HC	KDYIF	0.02	0.06	20	55	0.6	30	2.7
8610	634	WH-1HD	KDYI	0.2	0.18	25	60	0.4	26	2.6
8610	635	WH-1HE	KDYIF	0.05	0.22	20	55	0.2	24	2.2
8610	636	WH-1HF	KDYI	0.1	0.14	25	55	0.2	30	2.2
8610	637	WH-1FG	KDYIF	0.15	0.7	30	60	4.5	24	2.7
8610	638	WH-1FH	KDYI	0.1	0.2	20	60	0.25	30	2.6
8610	639	WH-1F1	KDYI	0.1	0.4	25	50	0.25	24	1.8
8610	640	WH-1FJ	KDYIF	0.05	0.06	20	60	0.1	24	1.7
8610	641	WH-1FK	KDYIV	0.05	0.01	20	55	0.3	24	1.8
8610	642	WH-1FL	KDYIA	0.1	0.34	25	50	0.1	18	1.9
8610	643	WH-1FM	KDYI	0.02	0.34	25	65	1	30	2
8610	644	WH-1FN	KDYI	0.02	0.02	20	60	0.02	34	2
8610	645	WH-2V	V-FQ	3.3	5.5	100	10	6.3	60	3.9
8610	646	WH-2H.5	KWYF	0.1	4.5	50	60	9.2	20	2.5
8610	647	WH-2H1	KDYIA	0.02	0.88	50	60	0.9	18	2.8
8610	648	WH-2H2	KDYIF	0.15	0.64	70	40	0.8	18	2.6
8610	649	WH-2H3	KDYIF	0.02	0.2	90	55	0.55	16	2.9
8610	650	WH-2H4	KDYIA	0.02	0.01	35	60	0.1	14	2.3
8610	651	WH-2H5	KDYIA	0.02	0.24	35	60	0.2	12	2
8610	652	WH-2H10	KDYIF	0.02	0.28	45	60	0.3	20	2.5
8610	653	WH-2F.5	KWYAF	0.1	0.24	70	60	19	20	4.7
8610	654	WH-2F1	KWYI	0.02	0.6	30	45	0.9	18	5
8610	655	WH-2F2	KWYI	1.3	0.58	25	50	0.8	20	4.7
8610	656	WH-2F3	KWYIA	0.15	0.16	30	60	1.2	20	2.2
8610	657	WH-2F4	KDYIM	0.4	0.44	40	65	1	14	2
8610	658	WH-2F5	KDYIF	0.05	0.6	35	70	0.7	16	2
8610	659	WH-4V	V-FM	0.6	5.5	160	20	1.2	36	3
8610	660	WH-4H.5	KDYI	0.02	5.5	40	80	1	26	2.1
8610	661	WH-4H1	KDYFA	0.3	0.9	60	50	1.4	18	4
8610	662	WN-4H2	KDYFI	0.1	0.9	90	45	3.7	14	5
8610	663	WH-4H3	KDYI	0.02	0.3	65	60	0.35	16	3.7
8610	664	WH-4H4	KDYI	0.1	0.44	25	55	0.15	22	3.7
8610	665	WH-4H5	KDYIF	0.05	0.34	35	50	0.1	22	5
8610	666	WH-4H6	KDYI	0.02	0.4	45	35	0.65	20	4.7
8610	667	WH-4F.5	KWYIF	0.02	5.5	80	95	4.8	16	2.4
8610	668	WH-4F1	KDYIF	0.02	0.32	55	70	0.4	16	4.4
8610	669	WH-4F2	KDYIF	0.02	0.9	20	45	0.1	24	3.9
8610	670	WH-4F3	KDYIF	0.02	0.58	25	45	0.1	24	3.9
8740	671	UH84-31	KBY1A	0.02	0.36	100	10	0.95	8	1.8
8740	672	UH84-32	VWAFQ	0.45	0.5	950	15	17	30	1.8
8740	673	UH84-33	KDAFI	0.1	0.24	210	15	0.85	22	3.4
8740	674	UH84-34	KDAI	0.02	0.08	50	15	0.85	2	2.4
8740	675	UH84-35	KDAF	0.05	0.01	100	3	1	8	5.8
8740	676	UH84-36	KDAI	0.02	0.08	20	25	0.2	38	2.2

APPENDIX 11C HERRERA ANALYTICAL RESULTS										
ELEV	BLM #	SAMPLE #	TYPE	Au	Hg	As	Zn	Ag	Sb	Tl
			ROCK	PPM	PPM	PPM	PPM	PPM	PPM	PPM
8740	677	UH84-37	KDAFI	0.05	0.68	1100	35	1.9	26	3.2
8740	678	UH84-38	KBEAXI	0.02	0.1	75	15	0.2	18	3.6
8740	679	UH84-39	KBVQ	0.25	0.06	70	25	0.8	190	2.4
8740	680	UH84-40	KDYA	0.02	0.42	30	150	-0.3	24	2.4
8740	681	UH84-41	KDAF	0.02	0.12	680	10	18	16	2.6
8740	682	UH84-42	V-F	8.6	0.78	420	75	14	110	6.8
8740	683	UH84-43	KWYFI	0.3	0.5	40	95	9.5	50	2
8740	684	UH84-44	KDAIF	0.02	0.64	360	20	0.4	8	3.4
8740	685	UH84-45	KDYI	0.02	0.06	2	95	0.7	20	1.2
8740	686	UH84-46	V-MF	7	1.1	2100	480	20	390	12
8740	687	UH84-47	KDIA	0.02	0.02	25	45	0.45	14	3.6
8768	688	MC-1A	KD1A	0.02	0.26	80	75	0.2	4	9.2
8768	689	MC-1B	KWYIA	0.25	0.56	190	45	0.6	2	8
8768	690	MC-2	KDIY	0.02	0.12	10	65	0.1	2	8.2
8768	691	MC-3X	KDIY	0.02	0.28	30	70	0.25	2	6
8768	692	MC-3Y	KDIA	0.05	0.5	20	65	0.1	2	3.4
8768	693	MC-421	KDIY	0.02	0.3	20	75	0.1	2	4.2
8768	694	MC-423	KDIA	0.02	0.02	10	90	0.1	2	6.2
8768	695	MC-425	KDAYF	0.02	0.3	60	90	0.7	1	9.9
8768	696	MC-426	KDAI	0.02	0.28	5	150	0.4	1	9.7
8768	697	MC-427	KDAIY	0.05	0.22	60	75	0.4	1	8.9
8768	698	MC-428	KDYFA	0.02	0.04	10	150	1.3	2	7.4
8768	699	MC-4V	V-F	0.8	1.2	25	25	2.2	6	2
8768	700	MC-429	KDAF	0.02	0.26	25	140	0.6	4	4.9
8768	701	MC-430	KDYFI	0.1	0.42	25	55	17	2	7.7
8768	702	MC-432	KWYI	0.02	0.18	140	60	0.4	2	10.4
8768	703	MC-434	KDYAF	0.02	0.06	105	40	0.05	2	11
8768	704	MC-436	KWFAY	0.1	0.62	290	15	1.2	4	11
8768	705	MC 5	V-RF	0.4	2.2	400	60	0.5	46	4.6
8768	706	MC-6A	V-RF	0.35	0.68	260	50	0.8	30	5
8768	707	MC-6B	KWAFY	0.05	1.5	240	10	0.75	2	13
8768	708	MC-7	KWAPY	0.05	0.58	490	20	0.6	2	12.3
8768	709	MC-8	KWAYF	0.1	0.08	20	10	2	2	12
8947	710	B2-17	VLPF	0.05	1.4	1300	5	0.4	86	1.4
8945	711	B2-20	SLQA	0.4	0.3	350	3	0.03	92	0.6
8938	712	B2-31	SLPA	0.2	0.26	100	3	0.05	22	0.2
8937	713	B2 33	VLAPS	26	0.78	700	5	0.05	76	0.6
8935	714	B2-35	VWAF	2.3	0.78	600	5	0.05	82	0.6
8932	715	B2-39	SLAPF	0.45	1	1200	20	0.55	80	1.4
8928	716	B2-45	SBAF	0.45	1.1	500	3	0.1	40	0.4
8927	717	B2-46	V-IS	0.15	0.3	55	3	0.1	6	0.2
8922	718	B2-53	ADKSF	0.05	1.2	400	2	0.1	22	0.8
8919	719	B2-58	VWFA	0.05	0.08	40	2	0.85	4	0.2
8918	720	B2-58	KBAY	0.05	0.62	470	2	5.7	12	0.6
8915	721	B2-63	VWKAY	0.1	0.26	160	3	0.75	2	1.2
8914	722	B2-65	KDAYI	0.02	0.52	195	3	1	6	1.8
8911	723	B2-70	KDAXF	0.75	0.06	95	5	0.15	8	0.8
8610	724	WH-4F4	KDYI	0.02	0.46	25	50	0.1	24	4.2
8610	725	WH-4F5	KWYIF	0.55	0.6	80	50	2.8	14	3
8610	726	WH-4F6	KDYIM	0.02	0.42	40	65	0.15	14	4.4
8740	727	BB-1B	ADYF	0.25	0.12	170	55	0.7	12	2.4
8740	728	BB-1	KBYI	0.15	0.08	30	10	0.4	72	0.6
8740	729	BB-2	V-R	2.2	2.4	740	390	7	230	16
8740	730	BB-3V	V-F	6.2	0.78	330	60	10	100	5

APPENDIX 11C HERRERA ANALYTICAL RESULTS										
ELEV	BLM #	SAMPLE #	TYPE	Au	Hg	As	Zn	Ag	Sb	Tl
			ROCK	PPM	PPM	PPM	PPM	PPM	PPM	PPM
8740	731	BB-3B	KDIAY	0.02	0.54	30	100	15	22	2~8
8740	732	BB-3C	KDYF	0.02	0.1	10	50	2	16	2.2
8740	733	BB-3D	KDYF	0.02	0.14	15	85	1	32	2.4
8740	734	BB-3E	KDYI	0.02	0.1	10	65	1.5	12	2.6
8740	735	BB-3F	KDYI	0.02	0.42	20	80	0.4	38	1.8
8740	736	BB-3G	KDYIF	0.02	0.38	10	90	0.5	4	2.2
8740	737	BB-3H	KDYI	0.02	0.22	30	75	15	26	2.4
8740	738	BB-3I	KDYVI	0.03	0.1	15	90	7	42	2
8740	739	BB-3J	KDYI	0.02	0.1	10	95	1.5	18	2.2
8740	740	BB-3K	KDYIF	0.02	0.2	190	50	0.5	16	2
8740	741	BB-3L	KDYI	0.02	0.16	70	40	1	20	2.6
8740	742	BB-3M	KDAFY	0.03	0.12	65	80	0.4	18	2.6
8740	743	BB-3N	KDYI	0.05	0.46	10	110	0.5	36	2.8
8740	744	BB-3O	KDYAF	0.25	0.6	230	35	2	20	2.8
8740	745	BB-3P	KDYI	0.05	1.4	30	140	0.2	38	2
8740	746	UH84-01	KDAFI	0.15	0.18	330	50	0.15	26	1.6
8740	747	UH84-02	KDIA	0.03	0.32	460	30	0.03	32	1.2
8740	748	UH84-03	VBQ	0.03	0.16	1500	25	0.25	270	0.1
8740	749	UH84-04	KDYI	0.02	0.08	20	45	0.02	110	0.8
8740	750	UH84-05	VBQ	0.4	0.02	460	65	0.8	1100	1
8740	751	UHB4-06	KWYI	0.35	0.06	70	55	38	24	1.8
8740	752	UH84-07	V-MF	24	0.46	150	55	53	42	3.4
8740	753	UH84-08	KDIA	0.05	0.06	35	45	0.5	16	1.4
8740	754	UH84-09	KWYI	0.35	0.08	35	50	1.8	6	2.2
8740	755	UH84-10	KDAFI	0.02	0.01	220	10	0.6	20	0.2
8740	756	UH84-11	VWFI	20	0.14	80	20	36	6	4
8740	757	UH84-12	KDYI	1.2	0.22	95	50	50	12	1.8
8740	758	UH84-13	KDYI	0.03	0.02	2	40	0.25	8	1.8
8740	759	UH84-14	VBQI	0.1	0.04	150	30	0.35	460	0.8
8740	760	UH84-15	KWYIF	0.15	0.08	50	40	9.3	8	1.4
8740	761	UN84-16	KDYI	0.02	0.18	2	60	0.02	12	1.8
8740	762	UH84-17	KDAF	0.1	0.02	75	100	0.5	12	3.6
8740	763	UH84-18	KDYI	0.03	0.14	2	85	8.7	8	2.6
8740	764	UH84-19	V-F	35	0.62	65	50	63	22	6.2
8740	765	UH84-20	KDFYI	0.35	0.36	25	100	21	18	3
8740	766	UH84-21	V-MA	0.3	0.66	130	480	3	56	11
8740	767	UH84 22	KBVY	0.45	0.34	170	70	6.9	250	2.2
8740	768	UH84-23	KDFAI	0.1	0.7	450	490	2.3	46	12
8740	769	UH84-24	KDYI	0.02	0.1	2	85	0.15	12	2.4
8740	770	UH84-25C	VBQ	0.2	0.22	15	5	1.2	32	2.8
8740	771	UH84-25V	V-F	2.2	1	520	30	8.9	110	3
8740	772	UH84-26	KWYFI	0.02	0.02	180	35	0.85	18	3
8740	773	UH84-27	KDYF	0.15	0.92	35	25	3.8	22	2.6
8740	774	UH84-28	KWIQY	0.15	0.5	20	20	0.7	26	3
8740	775	UH84-29	KDYI	0.02	0.9	35	90	0.85	12	2.4
8740	776	UH84-30	KBYI	0.4	0.6	50	10	1.6	68	3
8910	777	B2-71	KBXAF	1.1	0.06	95	20	0.9	24	1
8908	778	B2-73	KDAYF	0.05	0.06	105	15	0.75	12	0.4
8907	779	B2-75	KDXAF	0.2	0.04	90	30	0.4	12	1
8905	780	B2-78	KDAF	29	0.04	90	150	0.25	22	0.8
8903	781	B2-81	KWYF	0.05	0.02	75	20	0.1	36	0.2
8900	782	B2-85	KWYAF	0.15	0.02	75	145	0.2	10	1
8896	783	B2-90	KBTAF	0.02	0.26	100	40	0.65	12	1
8895	784	B2-91	KDATF	0.02	0.18	165	15	0.7	16	0.2

APPENDIX 11C HERRERA ANALYTICAL RESULTS										
ELEV	BLM #	SAMPLE #	TYPE	Au	Hg	As	Zn	Ag	Sb	Tl
			ROCK	PPM	PPM	PPM	PPM	PPM	PPM	PPM
8894	785	B2-93	V-F	0.02	0.36	15	3	100	12	0.2
8893	786	B2-95	KWIAF	0.1	0.12	65	10	0.8	6	0.4
8891	787	B2-97	KBAF	1.3	0.2	1100	10	5.1	58	0.8
8890	788	B2-99	VWAF	0.05	0.1	110	15	0.75	4	0.4
8882	789	B2-110	KWAF	0.02	0.04	2100	20	2.8	60	1.8
8882	790	B2-111	KDAFI	0.2	0.06	1000	5	0.6	42	0.8
8881	791	B2-112	KWAFI	0.3	0.02	1700	65	2.5	64	1.4
8880	792	B2-113	KDAI	0.4	0.02	195	2	0.55	18	0.4
8879	793	B2-115	KWTAF	0.15	0.04	2000	25	2.1	62	0.2
8876	794	B2-119	KDAFI	0.25	0.06	650	5	1.3	26	0.6
8873	795	B2-123	KWAF	0.05	0.1	650	5	1.8	34	1
8869	796	B2-128	KDTIP	0.1	0.24	450	5	1	14	0.8
8868	797	B2-130	KWYFA	0.05	0.1	800	10	28	16	0.1
8866	798	B2-132	KWYFA	0.02	0.78	800	20	44	22	0.1
8864	799	B2-135	V-F	0.02	0.42	30	3	43	4	0.1
8863	800	B2-137	KDYFA	0.02	0.04	450	30	1.6	12	3.2
8862	801	B2-138	KWTP	0.02	0.1	155	10	3.4	4	0.8
8862	802	B2-139	KWTP	0.1	0.08	150	5	0.3	6	3
8861	803	B2-140	KWTF	0.2	2.2	220	3	0.55	12	5.4
8860	804	B2-141	XWTPF	0.05	0.3	500	5	0.85	14	0.4
8854	805	B2-150	KDYI	0.02	0.02	65	110	0.1	60	2.8
8849	806	B2-157	KWTPI	0.05	0.04	160	50	0.5	6	2.8
8847	807	B2-160	KWTPI	0.02	0.06	200	30	0.15	8	0.6
8845	808	B2-162	KDYPI	0.03	0.04	175	40	0.55	4	2.3
8838	809	B2-173	KDITP	0.05	0.1	230	55	0.45	4	1.2
8830	810	B2 184	KDIYP	0.02	0.02	70	55	0.4	14	1.2
8828	811	B2-186	KDIF	0.02	0.02	55	50	0.3	20	2.6
8827	812	B2-188	KDTF	0.02	0.12	35	50	0.4	16	0.8
8812	813	B2-210	KWTI	0.85	0.12	50	30	17	4	1.6
8802	814	B2-223	KDTA	0.02	0.04	25	40	1.8	12	1.2
8799	815	B2-228	KDTI	0.02	0.02	15	90	2.8	20	0.8
8795	816	B2-234	V-R	2.3	2.4	1900	180	3.2	680	0.2
8792	817	B2-238	KWRA	0.15	0.04	70	30	1	2	0.6
8790	818	B2-240	KWAFY	0.2	0.04	70	10	4.5	2	0.4
8790	819	B2-241	KWAFY	0.2	0.02	50	35	0.45	2	0.8
8789	820	B2-242	KDYIA	0.02	0.02	25	80	1	28	1.6
8787	821	B2-244	KDTF	0.02	0.02	15	75	7.8	34	1.8
8785	822	B2-247	KDGI	0.05	0.01	20	60	0.1	54	0.8
8520	823	RC-NA1	ADKF	0.1	1.6	35	60	1	1	9.7
8520	824	RC-NA1X	ADKF	0.1	0.32	50	45	2	1	10
8650	825	RC-NB1	ADKF	0.02	0.22	30	65	0.8	1	13
8650	826	RC-NB1X	ADKF	0.02	0.1	35	80	1.7	1	2.1
8650	827	RC-NB1XX	AWKF	0.05	0.14	25	25	0.15	1	2.7
8540	828	RC-NC1	ADTK	0.15	0.06	45	5	4.6	1	6.3
8540	829	RC-NC2	KDFA	0.35	0.08	100	120	1.1	1	2
---	830	BV-1	V-PA	3.4	0.16	95	20	700	24	0.6
8720	831	EBR	HDAF	0.03	0.13	20	35	10	15	7
8720	832	EBM	HNQ	0.06	0.07	80	35	7	4	10
8720	833	EBW	HBAF	0.03	0.06	10	35	10	10	9.4

APPENDIX 11D:

U.S. GEOLOGICAL SURVEY

ANALYTICAL RESULTS

APPENDIX 11D. U.S. GEOLOGICAL SURVEY ANALYTICAL RESULTS																		
LAB #	BLM #	Field #	x,y - x	x,y - y	veins	AU-AA	AU-FIRE	AG-AA	AS-CM	CU	MO	PB	SB-CM	ZN	HG-DECT	ZN-AA	AG-AA	TE-AA
AEC329	1000					0.04				30	0	30	0	0	0.04	56	0	0.2
AEC330	1001					0.02				20	0	30	0	0	0.02	58	0	0.2
AEC331	1002					0.02				20	0	30	0	0	0.02	54	0	0.2
AEC397	1003					0.02				10	0	10	0	0	0.07	25	2.2	0.1
AEC398	1004					0.02				15	0	10	0	0	0.05	32	2	0.1
AEC399	1005					0.02				15	0	15	0	0	0.01	25	0.8	0.1
AEC400	1006					0.02				20	0	15	0	0	0.07	62	2.2	0.1
AEC401	1007					0.02				7	10	0	0	0	0.22	50	0.2	0.1
AEC402	1008					0.02				7	0	0	0	0	0.07	25	3	0.1
AEC403	1009					0.02				7	0	0	0	0	0.07	28	2.2	0.1
AEC404	1010					0.02				5	0	0	0	0	0.11	25	3	0.1
AEC696	1013	813-PI	6750	16660		0.02	0	0	0	30	0	30	0	0	0.1	38	0.01	0.2
AEC805	1014	814-1	8385	13095		0.02	0	0	0	20	0	15	500	0	0.22	88	0.25	0.2
AEC806	1015	814-2				0.02	0	0	0	15	0	20	0	0	0.03	70	0.75	0.2
AEC694	1016	815-P1	9680	13520		0.02	0	0	0	30	0	30	0	0	0.03	25	0.01	0.2
AEC801	1017	854-G1	4290	1020		0.02	0	0	0	20	0	15	0	0	0.07	82	0.25	0.2
AEC508	1018	855-011A	2570	2065		0.02	0	0	0	7	0	30	0	0	1.2	25	0.4	0.1
AEC511	1019	855-011B	2570	2065		0.3	0	3	500	50	0	15	0	0	3.8	50	0.2	0.1
AEC509	1020	855-011C	2570	2065		0.02	0	0	700	10	0	30	100	0	1.6	48	0.4	0.1
AEC510	1021	855-011D	2570	2065		1.1	0	2	700	30	70	20	150	0	10	25	0.8	0.1
AEC546	1022	855-R12	3070	1730		0.02	0	0.7	0	15	0	20	0	0	0.14	62	0.6	0.2
AEC577	1023	855-D13A	3260	2400		0.3	0	150	0	50	30	50	300	0	0.5	25	300	0
AEC565	1024	855-D13B	3260	2400		0.2	0	5	300	10	100	30	0	0	3	25	5.6	0
AEC578	1025	855-P14A	3620	2600		1.2	0	15	500	15	100	0	0	0	1.3	25	13	0
AEC566	1026	855-D14B	3620	2600		0.06	0	1	200	20	30	20	0	0	1.6	38	1	0.2
AEC547	1027	855-D15	3495	3450		0.02	0	0	0	20	0	20	0	0	0.06	66	0.6	0
AEC554	1028	855-D16A	3680	3810		1.8	0	5	0	10	0	20	0	0	0.45	25	4	0
AEC567	1029	855-D16B	3680	3805		0.5	0	0.5	0	0	0	10	0	0	0.5	28	0.2	0
AEC579	1030	855-D17A	3425	3950		0.2	0	20	0	20	30	10	0	0	1.16	25	16	0
AEC568	1031	855-D17B	3425	3950		0.04	0	7	0	15	15	30	0	0	2	32	12	0
AEC572	1032	855-D18A	3115	3340		0.08	0	150	0	20	20	20	700	0	1.66	36	240	0
AEC573	1033	855-D18B	3115	3340		0.06	0	5	0	30	20	70	0	0	1.25	400	3.2	0
AEC555	1034	855-D19A	3950	9350		0.08	0	3	0	20	70	15	0	0	1.1	80	2	0
AEC556	1035	855-019B	3950	9350		0.14	0	3	0	15	10	15	0	0	0.5	150	2.4	0
AEC557	1036	855-D20	3945	9390		3.6	0	10	0	15	0	10	0	0	0.65	32	15	0
AEC558	1037	855-021	3840	9385		0.06	0	2	0	30	0	20	0	0	0.45	80	1.6	0
AEC569	1038	855-P22	3630	9365		0.02	0	0.5	0	20	0	30	0	0	1.3	30	0.2	0
AEC559	1039	855-P23	3580	9460		0.02	0	1.5	0	30	10	20	0	0	0.5	42	0.8	0
AEC560	1040	855-P24	3520	9510		0.02	0	1.5	0	20	5	30	0	0	0.5	80	0.6	0
AEC561	1041	855-P25	3455	9495		0.02	0	1	0	20	5	20	0	0	0.5	60	0.6	0.2
AEC562	1042	855-P26	3410	9505		0.04	0	1	0	30	0	20	0	0	1.5	56	0.4	0
AEC563	1043	855-P27	3360	9520		0.02	0	2	0	20	7	30	0	0	2	68	1.2	0
AEC548	1044	855-028	3065	9665		0.02	0	0	0	20	0	15	0	0	0.11	66	1	0
AEC575	1045	855-D29A	2945	9690		0.04	0	2	0	30	5	10	0	0	1.1	25	4	0
AEC564	1046	855-P29B	2945	9690		0.04	0	3	0	15	7	20	0	0	2.2	25	1.6	0
AEC576	1047	855-D30A	2800	9610		2	0	0.7	0	20	0	10	0	0	0.3	25	0.6	0
AEC571	1048	855-D30B	2800	9610		0.04	0	0.5	0	50	0	30	0	0	0.5	25	0.2	0
AEC549	1049	855-031	2720	9750		0.02	0	0	0	20	0	15	0	0	0.3	140	0.6	0
AEC550	1050	855-032	2610	9745		0.02	0	0	0	20	0	15	0	0	0.15	160	0.4	0
AEC580	1051	855-D33A	2530	9725		0.02	0	1	0	50	0	50	0	0	1	25	0.4	0
AEC570	1052	855-P33B	2530	9725		0.04	0	0	0	30	5	15	0	0	1.1	40	0.8	0
AEC551	1053	855-034A	2400	9740		0.02	0	0	0	20	0	20	0	0	0.2	68	0.8	0
AEC574	1054	855-034B	2400	9740		0.02	0	0	0	20	0	20	0	0	0.9	72	0.6	0
AEC553	1055	855-P35A	2145	9775		0.02	0	0	0	20	0	15	0	0	0.18	110	0.8	0
AEC552	1056	855-D36	1320	9870		0.02	0	0	0	30	0	30	0	0	0.22	76	0.6	0
AEC486	1057	855-037A	3270	4460		0.02				20	0	15	0	0	0.02	62	0.6	0.1
AEC473	1058	855-P37B	3270	4460		0.02				10	0	20	0	0	0.08	25	0.4	0.1
AEC474	1059	855-P37C	3270	4460		0.02				15	0	15	0	0	0.26	74	0.6	0.1
AEC475	1060	855-P38	3730	4700		0.08				30	50	20	0	0	1.2	25	2.2	0.1

APPENDIX 11D. U.S. GEOLOGICAL SURVEY ANALYTICAL RESULTS																		
LAB #	BLM #	Field #	x,y - x	x,y - y	veins	AU-AA	AU-FIRE	AG-AA	AS-CM	CU	MO	PB	SB-CM	ZN	HG-DECT	ZN-AA	AG-AA	TE-AA
AEC489	1061	855-P39A	3390	5105		0.02				10	0	150	100	0	5.4	25	3.4	2.6
AEC476	1062	855-P39B	3390	5105		0.02				30	0	15	0	0	0.08	25	0.8	2.6
AEC525	1063	855-D40	3505	5155		0.02	0	0	0	30	0	10	0	0	0.07	34	0.2	0.1
AEC499	1064	855-D41A	2850	4885		8.8	0	7	0	10	0	0	0	0	0.05	25	6.8	0.4
AEC477	1065	855-P41B	2850	4885		0.4				70	0	100	150	0	2.6	25	13	3
AEC500	1066	855-D41C	2850	4885		0.9	0	7	0	700	0	100	700	0	10	44	27	20
AEC501	1067	855-D41D	2850	4885		0.9	0	7	0	1000	0	10	0	200	0.58	200	1.6	0.4
AEC502	1068	855-D41E	2850	4885		0.02	0	3	0	700	0	0	0	0	0.46	240	5.2	0.1
AEC490	1069	855-D42A	3000	5550		0.02	0	2	0	7	0	0	0	0	0.03	25	6.4	0.5
AEC504	1070	855-D42B	3000	5550		0.2	0	3	0	10	5	30	0	0	0.05	28	4	0.2
AEC503	1071	855-D42C	3000	5550		0.02	0	0	0	30	0	20	0	0	0.05	70	1.2	0.1
AEC505	1072	855-D42D	3000	5550		0.02	0	0	0	10	0	20	0	0	0.05	54	0.8	0.1
AEC491	1073	855-D42E	3000	5550		0.8	0	0.5	0	10	0	0	0	0	0.02	25	2	0.1
AEC492	1074	855-P42F	3005	5560		4.3	0	7	0	30	0	0	0	0	0.04	25	21	0.1
AEC493	1075	855-P42G	3005	5560		1.2				7	0	0	0	0	0.03	25	2.4	0.1
AEC494	1076	855-P43A	2620	5550		1.6	0	3	0	0	0	0	0	0	0.04	25	2.2	0.1
AEC478	1077	855-P43B	2620	5550		1				20	15	15	0	0	0.24	28	18	0.1
AEC495	1078	855-P43C	2620	5550		0.02	0	3	0	7	0	0	0	0	0.1	25	4	0.1
AEC526	1079	855-043D	2620	5550		0.02	0	0	0	20	0	20	0	0	0.05	56	0.6	0.1
AEC479	1080	855-P44	2260	5640		0.02				20	0	20	0	0	0.04	52	1.2	0.1
AEC487	1081	855-D45A	1935	5845		0.02				10	0	20	0	0	0.01	40	0.4	0.1
AEC496	1082	855-D45B	1935	5845		0.02	0	0	0	20	0	20	0	0	0.04	50	0.6	0.1
AEC480	1083	855-D45C	1935	5845		0.02				20	0	15	0	0	0.06	62	1	0.1
AEC481	1084	855-P46A	1820	6075		0.02				10	0	15	0	0	0.12	52	1	0.1
AEC497	1085	855-D46B	1460	6200		0.02	0	0.7	0	20	15	10	0	0	0.05	54	1.2	0.1
AEC498	1086	855-D46C	1460	6200		0.02	0	1	0	0	0	0	0	0	0.05	25	2.6	0.3
AEC483	1087	855-H46D	1410	6200		0.02				15	0	20	0	0	0.03	62	0.8	0.1
AEC482	1088	855-P46E	1360	6205		0.02				30	0	30	0	0	0.03	52	0.6	0.1
AEC512	1089	855-46m01	1820	6065		0.02	0	0.5	0	30	0	50	0	0	2	38	0.4	1.5
AEC513	1090	855-46m02	1870	6075		0.02	0	0	0	30	70	70	0	0	0.32	34	1.8	1.7
AEC514	1091	855-46m03	1890	6055		0.06	0	0.5	0	20	50	50	0	0	0.25	70	3.4	0.4
AEC515	1092	855-46m04	1915	6050		0.02	0	0	0	20	0	20	0	0	0.6	25	0.4	0.1
AEC516	1093	855-46m05	1935	6050		0.02	0	0	0	20	0	30	0	0	0.48	25	2	0.1
AEC517	1094	855-46m06	1950	6050		0.1	0	0.5	0	30	5	50	0	0	0.25	25	3	1.2
AEC518	1095	855-46m07	1980	6040		0.02	0	0	0	20	15	50	0	0	0.08	62	0.8	0.1
AEC519	1096	855-46m08	1980	6040		0.02	0	0	0	20	0	30	0	0	2.8	32	0.6	0.5
AEC520	1097	855-46m09A	2055	6030		0.7	0	0.5	0	5	10	30	0	0	0.05	88	1.6	1
AEC521	1098	855-46m09B	2055	6030		0.1	0	5	0	10	20	100	0	0	0.16	46	0.8	0.9
AEC522	1099	855-46m09C	2055	6030		0.4	0	3	0	20	20	20	0	0	0.08	50	3.8	0.9
AEC523	1100	855-46m09D	2055	6030		0.02	0	5	0	5	10	50	0	0	0.6	25	5.6	1.2
AEC527	1101	855-D47A	2255	5360		1.1	0	5	0	5	0	0	0	0	0.07	25	13	0.1
AEC506	1102	855-D47B	2255	5360		0.02	0	0	0	7	0	15	0	0	0.04	54	1	0.1
AEC484	1103	855-D47C	2255	5360		0.02				50	0	20	0	0	0.07	64	0.6	0.1
AEC528	1104	855-D47D	2255	5360		0.02	0	1	0	7	0	20	0	0	0.1	28	1.2	0.1
AEC486	1105	855-D47F	2255	5360		0.02				30	0	15	0	0	0.03	60	0.8	0.1
AEC485	1106	855-D48	2137	5170		0.02				20	0	15	0	0	0.05	54	0.6	0.1
AEC507	1107	855-D49	2010	5025		1.5	0	15	500	500	0	10000	150	3000	1.2	7000	38	5.3
AEC524	1108	855-H50	2850	4575		0.02	0	3	0	20	0	30	0	0	0.07	52	0.6	0.1
AEC588	1109	855-051	2025	7850		0.2	0	1.5	0	30	0	30	0	0	0.26	70	1	0.2
AEC583	1110	855-D52	1850	7570		0.06	0	0.7	0	30	0	30	0	0	2	58	0.6	0
AEC581	1111	855-P54A	1010	7640		0.04	0	0.7	0	30	0	30	0	0	3	88	1	0
AEC590	1112	855-P54B	1010	7640		0.02	0	0	0	10	0	30	0	0	1.2	38	0.4	0.2
AEC591	1113	855-D55A	1930	7110		0.08	0	0.7	0	30	0	30	0	0	0.5	66	0.6	0.2
AEC585	1114	855-055B	1930	7110		0.02	0	2	0	10	0	20	0	0	1.6	52	0.8	0.2
AEC592	1115	855-057	2355	7350		0.02	0	0	0	20	0	30	0	0	0.5	66	0.6	0.2
AEC586	1116	855-D58A#1	2320	7580		23	30	100	0	20	0	0	0	0	0.16	25	140	0.2
AEC587	1117	855-D58A#2	2320	7580		40	15	100	0	20	0	50	0	0	0.65	25	600	0.2
AEC582	1118	855-C58B	2320	7580		0.04	0	3	0	20	70	20	0	0	0.9	25	2.4	0
AEC584	1119	855-P59A	1510	7800		0.02	0	1	0	15	10	15	0	0	10	25	2	1
AEC589	1120	855-D59B	1510	7800		0.02	0	0.5	0	100	5	0	0	0	1	34	1.2	0.2

APPENDIX 11D. U.S. GEOLOGICAL SURVEY ANALYTICAL RESULTS																		
LAB #	BLM #	Field #	x,y - x	x,y - y	veins	AU-AA	AU-FIRE	AG-AA	AS-CM	CU	MO	PB	SB-CM	ZN	HG-DECT	ZN-AA	AG-AA	TE-AA
AEC888	1121	856-MA	3960	9580		20	20	1560	700	20000	10	1500	7000	5000	2.4	1000	800	80
AEC889	1122	855-MB	3880	9580		0.1	0	1	0	30	0	20	0	0	0.18	56	2.2	0.8
AEC461	1123	856-04B	4305	8905		0.2				5	0	0	0	0	0.22	26	1	0.1
AEC462	1124	856-04C	4305	8905		0.3				7	0	0	0	0	0.32	25	2.4	0.1
AEC471	1125	856-04D	4305	8905		0.02				15	0	10	0	0	0.07	72	1.2	0.1
AEC472	1126	856-04E	4305	8905		0.02				10	0	20	0	0	0.06	56	0.8	0.1
AEC803	1127	856-38	4120	13160		0.02	0	0	0	70	0	15	0	0	0.05	88	0.5	0.2
AEC665	1128	856-09B	4650	15330		0.02	0	0.7	0	15	0	20	0	0	0.01	36	0.4	0.2
AEC804	1129	856-310				0.02	0	0	0	15	0	15	0	0	0.02	68	0.25	0.2
AEC405	1130	856-P11	3750	10635		0.02				5	0	0	0	0	0.04	25	0.4	0.1
AEC406	1131	856-P12	3795	10622		0.02				7	0	20	0	0	0.05	25	0.2	0.1
AEC407	1132	856-P13	3840	10610		0.02				5	0	50	0	0	0.07	25	3.2	0.1
AEC408	1133	856-P14	3890	10595		0.02				5	0	15	0	0	0.06	25	0.8	0.1
AEC409	1134	856-P15A	3940	10585		0.02				5	0	15	0	0	0.07	25	0.6	0.1
AEC410	1135	856-P15B	3940	10585		0.02				10	0	15	0	0	0.14	25	5.6	0.1
AEC411	1136	856-P16	3975	10580		0.02				0	0	0	0	0	0.15	25	1	0.1
AEC412	1137	856-P17	4010	10565		0.02				7	0	15	0	0	0.05	25	1.6	0.1
AEC413	1138	856-P18	4050	10555		0.02				10	0	20	0	0	0.04	82	8.4	0.1
AEC414	1139	856-P19	4090	10545		0.04				5	0	70	0	0	0.26	25	5	0.5
AEC415	1140	856-P20	4125	10535		0.02				10	10	200	0	0	0.14	25	8	0.6
AEC416	1141	856-P21A	4165	10520		0.02				7	0	20	0	0	0.14	25	1.2	0.1
AEC417	1142	856-P21B	4165	10520		0.06	0	0.5	0	0	0	30	0	0	0.03	25	1.2	0.1
AEC418	1143	856-P22A	4200	10515		0.04				5	0	10	0	0	0.1	25	4.2	0.1
AEC419	1144	856-P22B	4200	10515		0.2				7	0	500	0	0	0.16	26	17	6
AEC420	1145	856-P23	4220	10510		0.04				5	0	10	0	0	0.13	25	1	0.1
AEC421	1146	856-P24A	4245	10505		0.02				7	0	15	0	0	0.07	60	0.6	0.1
AEC422	1147	856-P24B	4245	10505		0.02				5	0	50	0	0	0.4	26	0.4	0.1
AEC423	1148	856-P25	4285	10495		0.02				15	0	10	0	0	0.09	25	2.4	0.1
AEC424	1149	856-P26	4345	10485		0.02				5	0	10	0	0	0.2	36	17	0.1
AEC425	1150	856-P27	4455	10325		0.02				7	10	0	0	0	0.12	56	0.6	0.1
AEC426	1151	856-P28	4150	9680		0.02				10	0	10	0	0	0.05	25	95	0.1
AEC445	1152	856-P29A	5085	10250		0				15	0	10	0	0	0.03	64	0.8	0.1
AEC427	1153	856-P29B	5085	10250		0.02				15	0	20	0	0	0.09	78	1.8	0.1
AEC428	1154	856-P30	5120	10490		0.02				10	0	20	0	0	0.07	26	0.6	0.1
AEC429	1155	856-F31A	5405	10650		0.02				15	0	30	0	0	0.08	38	0.6	0.1
AEC447	1156	856-F31B	5405	10650		0.2				15	10	30	0	0	0.25	25	1.2	0.1
AEC448	1157	856-F32A	6020	10620		0.02				30	0	15	0	0	0.06	34	1	0.1
AEC449	1158	856-F32B	6020	10620		0.02				15	0	20	0	0	0.03	28	0.6	0.1
AEC430	1159	856-P33	3510	10370		0.02				10	0	10	0	0	0.03	82	0.8	0.1
AEC431	1160	856-P34A	3515	10665		0.04				7	10	200	0	0	0.2	25	6	0.1
AEC432	1161	856-P34B	3515	10665		0.02				7	7	70	0	0	0.02	25	1.6	0.1
AEC450	1162	856-D35A	3450	10765		0.4				30	10	150	0	0	3	25	30	2
AEC433	1163	856-D35B	3450	10765		0.08				20	20	70	0	0	0.7	30	2.8	0.1
AEC434	1164	856-P36	3470	10855		0.04				5	70	15	0	0	0.08	25	3.4	0.1
AEC436	1165	856-P37A	3240	11055		0.06				0	5	15	0	0	0.26	25	7	0.1
AEC435	1166	856-P37B	3240	11055		0.02				15	0	15	0	0	0.1	25	0.6	0.1
AEC437	1167	856-P38A	3060	11105		0.02				0	10	15	0	0	0.09	25	9.6	0.1
AEC438	1168	856-P38B	3060	11105		0.6				10	7	0	0	0	0.6	25	12	0.1
AEC439	1169	856-P39A	2820	11140		0.02				0	0	10	0	0	0.17	25	2.2	0.1
AEC440	1170	856-P39B	2820	11140		0.1				20	70	70	0	0	1.7	25	6.2	0.1
AEC451	1171	856-D40A	2675	11075		0.02				7	10	20	0	0	0.25	46	1.2	0.1
AEC456	1172	856-D40B	2675	11075		0.02				0	0	30	0	0	0.04	64	0.4	0.1
AEC452	1173	856-D40C	2675	11075		0.02				10	0	10	0	0	0.03	34	0.8	0.1
AEC453	1174	856-D41A	2550	10960		0.1				7	15	0	0	0	1.8	25	2.6	0.1
AEC441	1175	856-D41B	2550	10960		0.2				7	30	0	0	0	0.36	25	4.8	0.1
AEC442	1176	856-P42A	1840	11285		0.02				0	7	20	0	0	1.2	25	2.6	0.1
AEC443	1177	856-P42B	1840	11285		0.02				100	15	10	0	0	0.26	30	2.2	0.1
AEC444	1178	856-M43	2575	11240		0.02				30	7	30	0	0	0.04	25	0.8	0.1
AEC446	1179	856-P44	2275	11805		0.02				20	0	20	0	0	0.03	62	1	0.1
AEC457	1180	856-046	3970	9250		0.5				30	0	10	0	0	0.09	62	2.2	0.1

APPENDIX 11D. U.S. GEOLOGICAL SURVEY ANALYTICAL RESULTS																			
LAB #	BLM #	Field #	x,y - x	x,y - y	veins	AU-AA	AU-FIRE	AG-AA	AS-CM	CU	MO	PB	SB-CM	ZN	HG-DECT	ZN-AA	AG-AA	TE-AA
AEC464	1181	856-P46B	3910	9185		0.3				50	10	30	0	0	0.05	88	20	0.1
AEC465	1182	856-P46C	3910	9185		0.2				20	15	15	0	0	0.08	44	2.4	0.1
AEC458	1183	856-047	4030	9230		0.9				30	0	10	0	0	0.04	58	2.4	0.1
AEC459	1184	856-P48A	4115	9045		0.4				7	0	15	0	0	0.26	40	2.6	0.1
AEC460	1185	856-P48B	4115	9045		0.02				20	0	20	0	0	0.08	78	1	0.1
AEC463	1186	856-P49A	3910	9185		1.4	0	30	0	7	0	0	100	0	0.01	25	60	0.1
AEC466	1187	856-050	3875	9130		0.3				7	0	20	0	0	0.04	25	8.4	0.1
AEC467	1188	856-051A	3835	9035		1.9				7	0	10	0	0	0.07	38	2.8	0.1
AEC468	1189	856-051B	3835	9035		0.08				20	0	10	0	0	0.12	82	1.6	0.1
AEC529	1190	856-052	2555	8430		0.6	0	2	0	20	0	15	0	0	0.08	56	2	0.1
AEC530	1191	856-053	2665	8505		0.02	0	1	0	15	0	15	0	0	0.38	48	1	0.1
AEC531	1192	856-D54A	2955	8045		0.02	0	3	0	7	7	10	0	0	0.22	25	2.2	0.1
AEC532	1193	856-D54B	2955	8045		0.02	0	0	0	30	0	20	0	0	0.3	72	1	0.1
AEC535	1194	856-D54C	2955	8045		0.02	0	0	0	0	0	0	0	0	0.06	25	0.2	0.1
AEC542	1195	856-D54D	2955	8045		0.02	0	0	0	15	0	30	0	0	0.06	64	1	0.1
AEC536	1196	856-D55A	3160	7835		0.02	0	0	0	30	0	30	0	0	0.1	60	0.8	0.1
AEC533	1197	856-D55B	3160	7835		0.02	0	0	0	20	0	20	0	0	0.12	66	0.8	0.1
AEC534	1198	856-P56	3095	7720		0.02	0	0	0	20	0	15	0	0	0.44	48	0.4	0.1
AEC541	1199	856-D57	3085	7280		0.02	0	0	0	20	0	20	0	0	0.1	52	0.8	0.1
AEC537	1200	856-D58A	3685	7785		0.02	0	0	0	50	5	30	0	0	2	100	0.6	0.1
AEC544	1201	856-D58B	3685	7785		0.02	0	0	0	30	0	20	0	0	0.02	25	0.4	0.1
AEC545	1202	856-D591	3940	7860		0.02	0	0	0	20	0	15	0	0	0.03	25	0.4	0.1
AEC538	1203	856-P60A	5010	7505		0.02	0	0	0	30	0	30	0	0	0.2	25	0.4	0.1
AEC539	1204	856-P60B	5010	7505		0.02	0	0	0	30	0	30	0	0	0.21	25	0.2	0.1
AEC543	1205	856-060C	5290	7480		0.02	0	0	0	20	0	20	0	0	0.01	30	0.2	0.1
AEC540	1206	856-P61	3820	6780		0.02	0	0	0	20	0	15	0	0	3.4	42	0.2	0.1
AEC469	1207	856-062	4035	9050		0.3				20	0	20	0	0	0.09	66	2	0.1
AEC470	1208	856-063	4065	8980		0.02				20	0	15	0	0	0.05	76	1	0.1
AEC629	1209	856-D64A	5030	14720		0.4	0	7	0	30	10	20	0	0	0.55	25	1.8	0.2
AEC637	1210	856-D64B	5030	14720		3.8	0	7	0	5	5	0	0	0	0.5	25	10	0.2
AEC647	1211	856-D64C	5030	14720		0.02	0	5	0	30	10	0	0	0	0.45	25	1.2	0.2
AEC648	1212	856-D65A	4875	14670		0.08	0	1.5	0	20	0	15	0	0	0.16	52	1.2	0.2
AEC638	1213	856-D65B	4875	14670		8.1	0	15	0	15	0	0	0	0	0.65	25	29	0.2
AEC650	1214	856-D65C	4875	14670		0.04	0	0.5	700	20	15	20	150	0	1.8	25	0.8	0.2
AEC639	1215	856-P66A	5000	14910		4.8	0	15	0	15	0	0	0	0	0.75	25	36	0.2
AEC630	1216	856-066B	5000	14910		1	0	20	0	30	0	0	0	0	1.4	120	19	0.2
AEC640	1217	856-P67A	4990	15120		1.8	0	15	0	10	0	0	0	0	4	25	14	0.2
AEC631	1218	856-P67B	4990	15120		0.04	0	3	0	50	0	10	100	0	0.65	25	1	0.2
AEC641	1219	856-068A	5245	15480		3.7	0	15	0	10	0	0	0	0	0.22	25	63	0.2
AEC632	1220	856-068B	5245	15480		0.1	0	15	0	30	0	15	0	0	0.22	28	12	0.2
AEC649	1221	856-069A	4835	15295		0.02	0	7	0	20	0	15	0	0	0.05	48	1.6	0.2
AEC642	1222	856-069B	4835	15295		12	10	20	0	15	0	0	0	0	5.5	25	110	0.2
AEC643	1223	856-D69C	4835	15295		4.4	0	10	0	7	0	0	0	0	0.9	25	40	0.2
AEC651	1224	856-D69D	4835	15295		0.02	0	0	300	20	0	15	100	0	0.45	25	0.6	0.2
AEC633	1225	856-D70A	4650	15330		0.3	0	0.7	0	10	0	20	0	0	0.28	25	0.6	0.2
AEC634	1226	856-D70B	4650	15330		0.02	0	2	200	5	0	20	0	0	0.75	25	1.2	0.2
AEC655	1227	856-D71A	4615	14440		0.1	0	1	0	20	0	20	0	0	0.2	25	0.2	0.2
AEC652	1228	856-D71B	5260	13880		0.02	0	0.5	0	30	0	50	0	0	0.05	30	0.6	0.2
AEC657	1229	856-D71C1	5260	13880		0.02	0	0	0	7	0	0	0	0	0.01	48	0.2	0.2
AEC658	1230	856-D71C2	5260	13880		0.02	0	0	0	30	0	20	0	0	0.06	48	0.6	0.2
AEC653	1231	856-D71D	5260	13880		0.2	0	3	300	20	0	20	0	0	0.4	25	2.6	0.2
AEC644	1232	856-D71E	5260	13880		4.4	0	15	0	10	0	0	0	0	1	25	45	0.2
AEC656	1233	856-D71F	5260	13880		0.02	0	1.5	0	5	0	20	0	0	0.14	25	1.2	0.2
AEC654	1234	856-D71G	5260	13880		0.02	0	1.5	500	10	10	20	0	0	0.06	25	1.4	0.2
AEC645	1235	856-P72	4640	14255		0.6	0	7	0	7	5	0	100	0	0.7	25	10	0.2
AEC635	1236	856-D74A	4515	15210		0.02	0	1.5	0	15	0	20	0	0	0.18	30	0.6	0.2
AEC646	1237	856-D74B	4515	15210		9.7	0	7	0	5	0	0	0	0	0.22	25	55	0.2
AEC636	1238	856-D74C	4515	15210		0.02	0	10	0	30	0	30	0	0	0.28	22	10	0.2
AEC712	1239	856-P75A	4550	15240		7.2	0	20	0	10	0	0	0	0	0.5	25	64	0
AEC713	1240	856-P75B	4550	15240		13	10	100	0	20	0	20	0	0	0.4	25	110	0

APPENDIX 11D. U.S. GEOLOGICAL SURVEY ANALYTICAL RESULTS																		
LAB #	BLM #	Field #	x,y.- x	x,y - y	veins	AU-AA	AU-FIRE	AG-AA	AS-CM	CU	MO	PB	SB-CM	ZN	HG-DECT	ZN-AA	AG-AA	TE-AA
AEC715	1241	856-P75C	4550	15240		0.1	0	2	0	30	0	20	0	0	0.4	28	0.6	0
AEC714	1242	856-P75D	4550	15240		0.06	0	2	0	15	0	15	0	0	0.26	25	0.6	0
AEC686	1243	856-D76	4080	15415		0.02	0	0.7	0	30	0	50	150	0	0.15	44	0.2	0.2
AEC670	1244	856-P76C	3910	13865		0.06	0	10	0	15	0	30	0	0	0.12	25	11	0.2
AEC660	1245	856-D77A	3420	14425		0.1	0	5	300	50	200	30	0	0	0.45	25	3.4	0.2
AEC667	1246	856-D77B	3420	14425		0.04	0	3	300	15	15	30	0	0	0.45	25	1.4	0.2
AEC682	1247	856-D77C1	3420	14425		15	0	200	500	20	70	0	0	0	150	25	850	0.2
AEC683	1248	856-D77C1A	3420	14425		0.4	0	50	1000	15	150	20	100	0	1.1	25	45	0.2
AEC680	1249	856-D77D	3420	14425		0.04	0	1.5	0	20	0	20	0	0	0.2	90	1.4	0.2
AEC677	1250	856-D77F	3420	14425		0.06	0	2	500	20	10	30	100	0	0.65	25	1	0.2
AEC684	1251	856-078A	3970	13780		1.9	0	7	0	20	0	0	0	0	0.18	25	6.6	0.2
AEC668	1252	856-078B	3970	13780		0.2	0	50	200	30	0	30	0	0	0.15	36	41	0.2
AEC669	1253	856-078C	3970	13780		0.04	0	2	0	30	0	20	0	0	0.24	50	0.6	0.2
AEC685	1254	856-D79A	3910	13865		1.9	0	7	0	70	0	0	0	0	0.15	25	17	0.2
AEC661	1255	856-D79B	3910	13865		0.5	0	20	300	50	7	30	0	0	0.06	25	9.8	0.2
AEC662	1256	856-D80A	3810	14200		0.04	0	3	300	20	150	10	0	0	0.2	25	3	0.2
AEC671	1257	856-D80B	3810	14200		0.9	0	5	200	15	70	15	0	0	0.55	25	4.6	0.2
AEC672	1258	856-P81A	3670	14310		0.8	0	7	300	30	50	30	0	0	2.2	25	9.4	0.2
AEC673	1259	856-P81B	3670	14310		0.4	0	5	200	20	70	0	100	0	0.16	25	6.8	0.2
AEC681	1260	856-P81C	3670	14310		0.2	0	2	700	70	20	30	150	0	0.45	110	1.8	0.2
AEC663	1261	856-P81D	3670	14310		0.8	0	7	700	30	70	30	100	0	1.4	25	8.8	0.2
AEC664	1262	856-D82A	3420	14000		0.5	0	5	500	50	20	20	0	0	0.75	25	7	0.2
AEC674	1263	856-D82B	3420	14000		0.3	0	2	0	7	10	20	0	0	0.4	25	1.4	0.2
AEC678	1264	856-D82C	3420	14000		0.02	0	0.7	0	7	10	30	0	0	0.06	25	0.8	0.2
AEC698	1265	856-P83A	3280	15260		0.08	0	0	0	30	0	30	0	0	0.06	64	0.4	0.2
AEC676	1266	856-D83B	3250	13640		0.08	0	0.7	0	20	0	20	0	0	0.65	25	0.8	0.2
AEC675	1267	856-D83C	3250	13640		0.04	0	0.5	0	50	0	20	0	0	0.28	25	0.6	0.2
AEC679	1268	856-P84	3075	14360		0.02	0	0.7	200	15	0	20	0	0	0.35	25	0.6	0.2
AEC687	1269	856-D85A	3280	15260		0.04	0	5	0	20	0	20	0	0	0.15	68	1	0.2
AEC700	1270	856-D85B	6800	16400		0.08	0	2	700	20	0	30	150	0	0.4	25	1.2	0.2
AEC688	1271	856-D85C	3280	15260		0.8	0	150	0	15	5	30	0	0	0.65	25	7.8	0.2
AEC699	1272	856-D85D	3280	15260		0.02	0	0	0	20	0	20	0	0	0.15	30	0.01	0.2
AEC691	1273	856-D85E	3280	15260		0.1	0	7	0	10	0	30	0	0	0.45	25	7	0.2
AEC692	1274	856-D86A	6750	16660		0.02	0	0 5	0	30	0	30	0	0	0.03	34	0.2	0.2
AEC689	1275	856-D86B	6750	16660		0.08	0	50	0	20	0	20	0	0	1.4	52	39	0.2
AEC697	1276	856-D86C	3250	13640		8.6	15	10	0	15	0	0	0	0	0.65	25	11	0.2
AEC690	1277	856-D86D	6750	16660		0.5	0	5	0	15	0	30	0	0	0.65	25	1.6	0.2
AEC693	1278	856-P86E	6800	16400		0.02	0	0	0	30	0	30	0	0	0.15	38	0.2	0.2
AEC701	1279	856-P86E2	6750	16666		0.02	0	0	0	30	0	30	0	0	0.35	42	0.4	0.2
AEC701	1280	856-D86F	4120	13600		25	0	0	0	20	0	30	0	0	0.03	46	0.4	0.2
AEC593	1281	857-P1A	5490	14705		0.1	0	1.5	0	30	0	10	150	0	0.7	25	0.2	0.2
AEC594	1282	857-P1B	5490	14705		0.08	0	1	200	30	5	15	200	0	0.65	26	0.2	0.2
AEC601	1283	857-P1B	7390	13750		0.1	0	3	300	50	15	30	0	0	0.05	25	0.8	0.2
AEC608	1284	857-P2A	5780	15055		0.02	0	5	0	30	0	20	0	0	0.3	25	0.6	0.2
AEC595	1285	857-P2B	5780	15055		0.04	0	5	0	50	0	60	200	0	0.18	74	1.2	0.2
AEC617	1286	857-P3B	5760	14545		0.06	0	0.5	300	20	30	30	150	0	1.2	25	0.6	0.2
AEC596	1287	857-D4	6090	14630		0.02	0	5	0	20	0	30	0	0	0.07	54	4.8	0.2
AEC618	1288	857-D5A	6145	14020		1.7	0	5	500	30	0	15	300	0	5	25	5.8	0.2
AEC619	1289	857-D5B	6145	14020		0.02	0	1	0	20	0	20	0	0	0.7	25	0.2	0.2
AEC597	1290	857-P6A	6460	13975		0.02	0	0	300	7	15	30	0	0	0.08	25	0.8	0.2
AEC598	1291	857-P6B	6460	13975		0.02	0	0.5	200	20	7	15	300	0	0.7	52	2	0.2
AEC599	1292	857-07	6660	13820		0.02	0	0	0	15	0	30	150	0	0.18	25	0.2	0.2
AEC620	1293	857-P8	6795	14005		0.02	0	0	0	20	0	30	0	0	0.1	54	0.2	0.2
AEC600	1294	857-08B	6795	14005		0.02	0	0	0	20	0	30	0	0	0.11	25	0.2	0.2
AEC621	1295	857-P9A	7020	13860		0.02	0	0	0	20	0	50	100	0	0.2	64	0.4	0.2
AEC627	1296	857-P9B	7020	13860		0.3	0	3	0	30	15	20	100	0	0.22	26	0.6	0.2
AEC602	1297	857-P11	8000	13880		0.6	0	2	300	20	20	20	100	0	0.8	26	0.2	0.2
AEC622	1298	857-P12A	7910	13930		0.04	0	1	200	7	0	30	0	0	0.22	25	0.6	0.2
AEC603	1299	857-P12B	7910	13930		0.1	0	1	500	20	15	20	0	0	0.12	26	0.4	0.2
AEC623	1300	857-P13	7885	13700		0.02	0	0	0	20	0	30	0	0	0.18	26	0.4	0.2

APPENDIX 11D. U.S. GEOLOGICAL SURVEY ANALYTICAL RESULTS

LAB #	BLM #	Field #	x,y - x	x,y - y	veins	AU-AA	AU-FIRE	AG-AA	AS-CM	CU	MO	PB	SB-CM	ZN	HG-DECT	ZN-AA	AG-AA	TE-AA
AEC604	1301	857-014	8135	13500		0.02	0	0.5	0	50	0	30	100	0	0.14	25	1.4	0.2
AEC605	1302	857-D15A	7780	13260		0.1	0	2	500	15	15	30	0	0	0.18	25	2	0.2
AEC606	1303	857-D15B	7780	13260		0.02	0	1	0	15	0	50	0	0	0.06	52	0.2	0.2
AEC613	1304	857-D15B	7780	13260		0.3	0	2	500	50	7	10	150	0	1	28	1.8	0.2
AEC609	1305	857-D15C#1	7780	13260		0.04	0	2	700	50	30	30	0	0	0.24	25	0.2	0.2
AEC611	1306	857-D15C2	7780	13260		0.08	0	5	200	5	300	0	0	0	0.2	25	2	0.2
AEC628	1307	857-D15E	7780	13260		0.02	0	2	0	30	7	30	0	0	0.13	25	0.4	0.2
AEC610	1308	857-D16A	6250	13430		1	0	15	0	50	5	30	0	0	1.05	50	0.6	0.2
AEC612	1309	857-D16B	6250	13430		3.8	0	15	300	20	10	0	200	0	0.6	25	10	0.2
AEC625	1310	857-017	7480	16450		0.02	0	0	0	30	0	50	0	0	0.4	48	0.2	0.2
AEC607	1311	857-018	8655	12090		0.02	0	0	0	70	0	30	150	0	0.15	100	0.2	0.2
AEC615	1312	857-D19A	8490	13040		0.04	0	1.5	700	20	0	20	0	0	0.35	28	1.2	0.2
AEC614	1313	857-D19B	8490	13040		0.7	0	7	500	50	0	0	150	0	0.24	26	13	0.2
AEC624	1314	857-P20A	9440	12560		0.02	0	0	0	20	0	30	0	0	0.22	28	0.2	0.2
AEC626	1315	857-P20B	9440	12560		0.02	0	0	0	70	0	30	100	0	0.13	25	0.01	0.2
AEC616	1316	857-P34	5760	14545		0.04	0	0.5	200	20	50	30	100	0	0.4	25	0.4	0.2
AEC871	1317	BT-0032	3320	15160		0.02	0	0	0	7	0	20	0	0	0.03	38	0.6	0.2
AEC750	1318	BT-0068A			X	0.02	0	0	0	5	0	0	0	0	1.6	25	0.25	0.2
AEC777	1319	BT-0110				0.02	0	0	0	20	0	20	0	0	0.26	44	0.5	0.2
AEC749	1320	BT-0129A	3410	15105	X	0.02	0	0	0	50	0	20	0	0	1.3	25	0.5	0.2
AEC869	1321	BT-0129B				0.04	0	0	0	15	0	20	0	0	0.15	56	0.5	0.2
AEC868	1322	BT-0155				0.02	0	0	0	20	0	20	0	0	0.55	44	0.5	0.6
AEC867	1323	BT-0200A				0.02	0	0	0	10	0	20	0	0	0.08	46	1	0.2
AEC887	1324	BT-0200B				0.02	0	0	0	20	0	30	0	0	0.4	28	1.4	0.2
AEC776	1325	BT-0220				0.02	0	0	0	15	0	30	0	0	0.3	50	0.25	0.2
AEC866	1326	BT-0250				0.04	0	0	0	10	0	20	0	0	1.3	48	0.75	0.2
AEC864	1327	BT-0300A				0.04	0	0	0	10	0	20	0	0	0.24	52	0.5	0.2
AEC865	1328	BT-0300B				0.02	0	0	0	30	0	20	0	0	0.05	40	0.25	0.2
AEC775	1329	BT-0340				0.02	0	0	0	30	0	20	0	0	0.2	58	0.5	0.2
AEC774	1330	BT-0346				0.06	0	0	0	30	0	20	0	0	0.26	54	0.5	0.2
AEC773	1331	BT-0377				0.02	0	0	0	30	0	20	0	0	0.4	56	0.25	0.2
AEC863	1332	BT-0396				0.06	0	0	0	30	0	10	0	0	1.1	25	0.5	0.2
AEC748	1333	BT-0397	3640	14970	X	0.02	0	0	0	5	0	0	0	0	0.65	25	0	0.4
AEC772	1334	BT-0401				0.04	0	0	0	50	0	30	0	0	2.4	26	0.5	0.2
AEC862	1335	BT-0415	3000	5550		0.02	0	0	0	5	0	20	0	0	2.4	56	0.75	0.2
AEC884	1336	BT-0425				0.02	0	0	0	5	0	20	0	0	1.2	52	0.4	0.2
AEC771	1337	BT-0444				0.1	0	0	0	10	0	20	0	0	5	50	0.75	0.4
AEC861	1338	BT-0450				0.02	0	0	0	5	0	10	0	0	0.8	44	0.25	0.2
AEC860	1339	BT-0505				0.02	0	0	0	5	0	20	0	0	2.4	46	0.5	0.2
AEC770	1340	BT-0509				0.04	0	0	0	15	0	15	0	0	2.2	72	0.5	0.2
AEC747	1341	BT-0526			X	0.02	0	0	0	10	0	10	0	0	1	98	1	0.2
AEC883	1342	BT-0546B				0.04	0	0	0	20	0	10	0	0	0.9	25	1.2	0.2
AEC859	1343	BT-0549				0.02	0	0	0	5	0	20	0	0	1	46	0.5	0.2
AEC769	1344	BT-0551				0.04	0	0	0	10	0	30	0	0	4.5	64	1	0.2
AEC768	1345	BT-0563				0.1	0	0	0	10	0	20	0	0	0.4	42	0.25	0.2
AEC746	1346	BT-0596A			X	0.08	0	1	0	10	0	30	0	0	1.6	38	2	0.2
AEC858	1347	BT-0598				0.02	0	0	0	5	0	10	0	0	5	46	0.25	0.2
AEC767	1348	BT-0601				0.06	0	0	0	20	0	100	0	0	2.4	56	0.5	0.2
AEC857	1349	BT-0629				0.02	0	0	0	5	0	10	0	0	2.6	58	0.25	0.4
AEC745	1350	BT-0630A	3840	14850	X	0.08	0	[illegible]	0	10	0	10	0	0	2.4	30	0.75	0.2
AEC882	1351	BT-0630B				0.02	0	5	0	5	0	20	0	0	1.2	48	1.2	0.2
AEC856	1352	BT-0650				0.02	0	0	0	7	0	10	0	0	3.5	42	0.5	0.2
AEC870	1353	BT-0688				0.02	0	0	0	20	0	30	0	0	0.1	42	0.75	0.2
AEC765	1354	BT-0698A				0.06	0	[illegible]	0	7	0	20	0	0	0.16	50	1.5	0.2
AEC766	1355	BT-0698B				0.02	0	[illegible]	0	15	0	30	0	0	2	25	1	0.2
AEC855	1356	BT-0736				0.02	0	0	0	7	0	20	0	0	6.5	46	1	0.2
AEC744	1357	BT-0737			X	0.08	0	2	0	10	5	10	0	0	5.5	54	1	0.6
AEC854	1358	BT-0759				0.02	0	0	0	7	0	20	0	0	0.45	62	0.5	0.2
AEC743	1359	BT-0761			X	0.1	0	2	0	15	0	10	0	0	2.2	40	3	0.2
AEC886	1360	BT-0784				0.08	0	0	0	20	0	20	0	0	1.3	32	0.8	0.2

APPENDIX 11D. U.S. GEOLOGICAL SURVEY ANALYTICAL RESULTS																		
LAB #	BLM #	Field #	x,y - x	x,y - y	vens	AU-AA	AU-FIRE	AG-AA	AS-CM	CU	MO	PB	SB-CM	ZN	HG-DECT	ZN-AA	AG-AA	TE-AA
AEC764	1361	BT-0812				0.04	0	0	0	5	0	10	0	0	1	42	1	0.2
AEC742	1362	BT-0815A			X	0.1	0	1	0	5	0	0	0	0	0.75	25	1.3	0.2
AEC853	1363	BT-0815B				0.08	0	1	0	7	0	20	0	0	1.1	30	2.5	0.2
AEC852	1364	BT-0846				0.02	0	0	0	5	0	20	0	0	0.75	52	0.25	0.2
AEC741	1365	BT-0849A			X	0.1	0	2	0	10	0	10	0	0	1	25	1.3	0.4
AEC740	1366	BT-0879A			X	0.4	0	10	0	10	0	10	0	0	3.5	32	14	0.6
AEC800	1367	BT-0879B				0.02	0	0	0	7	0	20	0	0	1.8	56	0.5	0.2
AEC739	1368	BT-0903A			X	0.02	0	1	0	5	0	10	0	0	1.3	25	0.75	0.2
AEC885	1369	BT-0903B				0.02	0	0	0	0	0	20	0	0	1	46	0.4	0.2
AEC738	1370	BT-0924A			X	0.4	0	1	0	0	0	0	0	0	1	25	1.5	0.2
AEC799	1371	BT-0924B				0.02	0	0	0	0	0	10	0	0	0.5	56	0.5	0.2
AEC763	1372	BT-0939				0.04	0	0	0	5	5	20	0	0	3.5	64	0.5	0.2
AEC798	1373	BT-0950				0.04	0	0	0	5	0	20	0	0	6	62	0.5	0.4
AEC797	1374	BT-0969				0.02	0	0	0	0	0	10	0	0	1.5	120	0.5	0.02
AEC737	1375	BT-0972A	4125	14675	X	0.5	0	1	0	5	0	10	0	0	0.9	44	2.8	0.8
AEC881	1376	BT-0972B				0.1	0	0	0	5	0	10	0	0	0.9	44	0.8	0.2
AEC796	1377	BT-1000				0.02	0	5	0	30	0	20	0	0	6	130	4	0.4
AEC736	1378	BT-1025A			X	0.9	0	30	0	0	0	0	0	0	4	26	53	0.6
AEC795	1379	BT-1025B				0.02	0	0	0	0	0	20	0	0	5	94	0.75	0.2
AEC794	1380	BT-1050				0.04	0	0	0	0	0	20	0	0	7.5	96	0.75	0.4
AEC762	1381	BT-1053				0.04	0	0	0	20	0	10	0	0	8	58	1.5	0.2
AEC761	1382	BT-1076				0.1	0	0	0	5	0	20	0	0	0.4	100	1.5	0.2
AEC735	1383	BT-1090A			X	0.02	0	0	0	10	0	0	0	0	0.03	25	0	0.2
AEC793	1384	BT-1090B				0.02	0	0	0	5	0	20	0	0	0.3	25	0.25	0.2
AEC734	1385	BT-1116A			X	0.02	0	0	0	10	0	0	0	0	5.5	25	1	0.4
AEC792	1386	BT-1116B				0.04	0	0	0	5	0	10	0	0	1.2	25	0.5	0.2
AEC880	1387	BT-1150				0.04	0	0	0	15	0	10	0	0	2.4	25	1.2	0.2
AEC760	1388	BT-1186A				0.04	0	0	0	5	0	20	0	0	0.26	26	0.5	0.2
AEC791	1389	BT-1186B				0.02	0	0	0	5	0	20	0	0	0.26	25	0.75	0.2
AEC733	1390	BT-1205A	4325	14550	X	0.02	0	0	0	5	0	0	0	0	1	25	1	0.2
AEC790	1391	BT-1205B				0.02	0	0	0	1000	0	20	0	0	0.5	40	0.75	0.2
AEC732	1392	BT-1227			X	0.06	0	0	0	10	0	10	0	0	6.5	25	0.75	0.2
AEC759	1393	BT-1227/05				0.06	0	3	0	5	0	20	0	0	100000	25	2	0.2
AEC731	1394	BT-1246A			X	0.02	0	0	0	30	0	10	0	0	0.65	32	0.5	0.8
AEC789	1395	BT-1246B				0.04	0	0	0	0	0	20	0	0	1.3	25	0.5	0.2
AEC879	1396	BT-1273A				0.04	0	20	0	5	0	0	20	0	2	25	0.8	0.2
AEC758	1397	BT-1273B				0.04	0	1	0	10	0	20	0	0	1	25	2	0.2
AEC730	1398	BT-1292A			X	0.06	0	0	500	30	5	10	0	0	2	36	1	0.2
AEC788	1399	BT-1292B				0.02	0	0	0	5	0	20	0	0	4	25	1.5	0.2
AEC787	1400	BT-1305				0.04	0	0	0	0	0	10	0	0	1.8	25	0.75	0.2
AEC757	1401	BT-1309				0.06	0	0	0	30	10	10	0	0	1	25	0.5	0.2
AEC878	1402	BT-1312				0.1	0	0	0	30	20	20	0	0	10	25	6.6	0.2
AEC729	1403	BT-1339A			X	0.02	0	0	0	30	0	0	0	0	0.26	25	0.5	0.2
AEC877	1404	BT-1341				0.04	0	2	0	20	0	20	0	0	0.15	25	0.4	0.2
AEC876	1405	BT-1372				0.06	0	0	700	50	0	20	0	0	4	25	2.2	0.2
AEC728	1406	BT-1391A				0.08	0	0	500	50	5	10	0	0	4	48	1	0.2
AEC875	1407	BT-1391B				0.1	0	0	500	30	5	20	0	0	5	25	1.2	0.2
AEC755	1408	BT-1400A				0.04	0	0	1000	150	10	20	0	0	2.6	48	1	0.2
AEC786	1409	BT-1400B				0.02	0	0	0	5	0	10	0	0	2.8	38	0.25	0.2
AEC727	1410	BT-1411A	4500	14440		0.02	0	0	0	20	0	0	0	0	0.65	25	0.25	0.2
AEC785	1411	BT-1411B				0.02	0	0	0	5	0	15	0	0	0.4	25	0.25	0.2
AEC726	1412	BT-1432A				0.04	0	0	0	30	5	10	0	0	7.5	70	0.75	0.2
AEC784	1413	BT-1432B				0.02	0	0	0	7	0	15	0	0	1.6	60	0.5	0.2
AEC725	1414	BT-1446A				0.04	0	0	0	50	0	0	0	0	1	34	0.25	0.2
AEC783	1415	BT-1446B				0.02	0	0	0	30	0	15	0	0	1	26	0.5	0.2
AEC754	1416	BT-1465A				0.02	0	0	200	10	5	20	0	0	2	25	0.5	0.2
AEC874	1417	BT-1465B				0.04	0	5	0	20	0	20	0	0	3	25	0.4	0.2
AEC782	1418	BT-1475				0.1	0	0	0	5	0	10	0	0	1	46	0.75	0.2
AEC752	1419	BT-1483A				0.02	0	0	200	15	5	20	0	0	1	46	0.25	0.2
AEC753	1420	BT-1483B				0.02	0	0	0	20	5	20	0	0	1.6	60	0.25	0.2

APPENDIX 11D. U.S. GEOLOGICAL SURVEY ANALYTICAL RESULTS																		
LAB #	BLM #	Field #	x,y - x	x,y - y	veins	AU-AA	AU-FIRE	AG-AA	AS-CM	CU	MO	PB	SB-CM	ZN	HG-DECT	ZN-AA	AG-AA	TE-AA
AEC873	1421	BT-1500				0.1	0	0	0	7	10	20	0	0	4	25	3.4	0.2
AEC724	1422	BT-1522				0.04	0	0	0	30	0	0	0	0	0.4	26	0.5	0.2
AEC781	1423	BT-1547				0.04	0	0	0	50	0	20	0	0	2.2	115	0.75	0.2
AEC723	1424	BT-1579A				0.06	0	0	0	30	0	10	0	0	1.3	25	0.25	1.6
AEC872	1425	BT-1579B				0.06	0	0	0	7	5	20	0	0	0.6	26	0.4	0.2
AEC722	1426	BT-1600A				0.06	0	0	0	50	10	10	0	0	10	50	1	0.2
AEC780	1427	BT-1600B				0.02	0	1	0	5	0	30	0	0	6	25	0.5	0.2
AEC751	1428	BT-1622A				0.04	0	2	0	10	5	20	0	0	2.2	30	3.8	0.2
AEC721	1429	BT-1640A	4695	14225		0.08	0	0	0	30	10	10	0	0	0.65	64	1.3	0.2
AEC778	1430	BT-1640B				0.06	0	0	0	5	0	20	0	0	1.6	25	0.5	0.2
AEC851	1431	BT-549B				0.02	0	5	0	5	0	20	0	0	1	52	4.8	0.2
AEC455	1432	GOOD SHAW #	3680	10780		0.02				10	0	20	0	0	0.36	38	1.4	0.1
AEC454	1433	GOOD SHAW #	3680	10780		0.2				70	0	30	0	0	0.06	64	1.2	0.1
AEC890	1434	H1	5880	12860	X	0.1	0	2	0	30	0	20	0	0	0.7	25	1.6	0.6
AEC891	1435	H2	5840	12750	X	200	100	2000	0	0	0	0	0	0	1.3	46	1000	0.2
AEC892	1436	H2A	5920	12750		0.9	0	500	0	30	0	20	0	0	2.8	70	130	0.2
AEC802	1437	LILAC	5920	10720		0.02	0	0	0	15	0	15	0	0	0.06	72	0.25	0.2
AEC893	1438	MCCLIN	4300	13785		8	0	7	0	30	0	0	0	0	0.26	25	8.2	0.2
AEC702	1439	R008	4000	13600		0.2	50	20	0	15	0	0	0	0	0.2	25	19	0.2
AEC707	1440	R010	4080	13600		0.3	0	7	0	70	0	70	0	0	0.75	48	3.8	0.2
AEC703	1441	R031A	4000	13320		14	30	50	0	30	0	0	0	0	0.24	25	16	0.2
AEC708	1442	R031B	3960	13600		5.3	0	15	0	50	5	15	0	0	6.5	36	15	0.2
AEC704	1443	R065A	3920	13600		1.6	0	7	0	15	0	0	0	0	0.3	25	6.8	0.2
AEC709	1444	R069A	3880	13600		0.2	0	5	0	20	0	15	0	0	0.7	25	4.8	0.2
AEC705	1445	R075A	3840	13320		0.7	0	15	0	20	0	0	0	0	0.35	25	1.2	0.2
AEC710	1446	R075B	3800	13600		0.08	0	3	0	20	0	10	0	0	0.65	25	3.2	0.2
AEC711	1447	R080	3760	13600		0.02	0	2	0	100	0	30	0	0	0.2	25	0.6	0.2
AEC716	1448	RCD1A	3740	8500		5.9	0	500	700	20000	10	500	10000	10000	1	21000	1400	8
AEC717	1449	RCD1C	3840	8500		3.1	0	1000	700	20000	20	20000	10000	7000	0.75	14000	2200	16
AEC718	1450	RCD1D	3900	8500		0.1	0	7	0	100	0	150	0	0	0.01	60	3.6	0.5
AEC720	1451	RCD1E	3960	8500		0.02	0	0	0	30	0	30	0	0	0.1	60	0.2	0
AEC719	1452	RCD1F	4020	8500		0.02	0	1	0	50	0	50	0	0	0.06	46	0.6	0
AEC706	1453	RD20	4040	13600		0.9	15	10	0	20	0	0	0	0	0.26	25	1.2	0.2
AEC807	1454	S#1	2655	3480		0.02	0	0	0	30	0	10	0	0	0.05	94	0.25	0.2
AEC659	1455	UHDBDIA	4280	15200		0.02	0	15	500	20	10	30	0	0	0.26	25	23	0.2
AEC666	1456	VHOBDIB	4280	15200		0.1	0	50	0	20	0	15	0	0	0.16	25	39	0.2
AEC808	1457	W.S.#1				0.02	0	0	0	30	0	15	0	0	0.02	68	0.25	0.2

APPENDIX 12:

HERRERA CORE DESCRIPTIONS

BB-3

121.5' - 124' - dacite mod silc, Feld → soft
basically fresh rx.

124 - 127 Mod to mild. bleached & oxidized zone starting of w a structure @ 124' (TW = .1' @ 40° to c/A)
pervasive Bxa @ 125.5' qtz gangue, open space
Rock is strongly silicified

128 - minor veins TW = .04' @ 30° to c/a looks like host rx is baked

128 - 130 - Silicified w/ oxidized veins @ 129' @ 70° to c/A of qtz & Bxa, very small structures - baked dacite host!
128.5 - Bxa structure

130 - 133 mod propylitized zone, of a finer grain than normal intrusive dacite, vuggy veinlets, very minute veinlets possessing pyrite + other dk sulf.

133 - 141.5 - silicified dacite w/ baking veins @ several spots (135.5, 138, 142)

141.5 - 142 HW of major vein @ 142-145
The HW is Brecciated & veined w/ qtz No disseminations present
Vein FW = .7' to .9' @ 50° to c/A limonitic interbands
Small veinlets in FW No real Brecciation
Very vuggy are the veinlets

145' - veined FW, No Bxa, vuggy, mild bleaching ≈ 2' out from FW of vein

@ 147 to 148.5 dacite darkens up, still silicified
Fresher plag. + matrix

BB3

124-128 veined zone, baked host? 12-4
limonite, silic.

147.8 to 148.5 - oxidation baking? of dacite
148.5 - 150 minor-mod propyl. Pink rx Bxa infill of
sulfides + white unk (good for x-ray work)
pyrite

151-152 structure w/ epith. qtz. highly broken
152-154 - zone of veins @ 80° to c/A TW = .04"
rx very silicified. Flat structures.

155 - porcelain like vein

156 - 162 - basically ~~unalt~~ unaltered dacite, feld are
punky, some micro veinlets

162-174 - zone Bxa, c qtz veinlets silic. dacite pinkish
purple color

174-176 - HW to rubbled vein @ 176-177'

177 - bleached baked FW to vein
177 to 183 zone of qtz vein brecciation
183 - 195 mod-mild oxidation (FeO) staining of rx
lots of qtz stained in vugs of Bxa zones
rx is ~~mod~~-weak silicified

195-215 - Fresh hornblende silic -mild.
Slightly alt plag
Some minor (veins shears) w/ lim. stain

213'-218' mild propylitic al

216 - 217.4 vein @ 70° to c/A some Bxa near FW
(degree alt of fluids) very interesting structure @ 217.4

PAGE 1

12-2

CORE Logging
Scale 1' = 20"

DATE 8/23
HOLE # BB3

Location: Bodie
∠ to HORIZ-

Box # & Footage

10
30
50
70
90
110
120
140
160
180

Condition
Sample #

strong vein @ ~~142~~ 144

Structures, Rx Description, mineralization
WHERE SAMPLED AREAS OCCUR (Footage, sample #, Veins

26-80 - strongly silicified zone, has hematitic zones, lots of open space, sporadic oxidatio
Samples Green to red chalcedony..
@ ~~26~~-30', 35', 39', 44', 50', 53', 54', 55'
60', 63', 67', 68-70, 74', 76, 78
lots of veins, lots of Bxa, lots of silica
76-78 Gougy zone very Brecciated.
Wall rx is green, lim stained, strongly silicic, hem
80-82 - sulfid rich, Bxa w/ chalced.
82-92 - gougy zone of white clay w/ limonite ~~[illegible]~~ - bxa frag chal
92-93 vein of qtz + ..
93-106 very brittle rx w/ bxa & vugs + oxidized zone, Rock is silic after bleaching maybe propylit,
Samples 80-83', 83-84, 84-86', 86-92', 92-93,
93-98, 98-101, 101-103, 103-106,
108-110, 110-112.5, ~~[illegible]~~
112.5' - 118.5' Zone of mod bleaching, strong silic, mod oxidized
lots of minor oxidized veins
118-121.5 - gradation into fresher rx lack of bleaching
121.5 - 170 Fresh rx except strongly silicified has stockwork using w/ vugs & oxidized zones, some zones of Brecciation
142 some epithermal structures no real alt. of wall rx.
Samples 112.5-114, 114-118, 118-128, 128-138',
138-141.5, 141.5 to 142, 142-144, 144-146, 146-14

BB3 12-5

217.4 – 218 FW to vein

218' – 233 – Bxa in some places – brecciated by qtz rich veins w/ vugs

232.9 HW

233 – structure gouge + banded qtz

234.5 – FW

234.5 – 257 – silic dacite vuggy areas of lim & qtz

257 – 295.9 Dacite – silic, mod lim ~~staining~~ vugs of qtz, Bxa zones w/ limonitized clasts very prevalent in this zone

295.9 – 357.5 –
same ole dacite same silic, lim features
@ 307 3/4 foot gouge zone w/ hem staining

307 – 357.5 – same ole dacite, varies w/ purple color, hornblende rich, texture gets finer around 338 – 340.

Samples

357.7 – 384
384 – 385 HW of FW
385.4 HW
385.8 Structure
385.9
386
386.4
388 – 391

391 – 394
394 – 398.5
398.5 – 403.6
404 – 408

BB3 12-7

504 - 519 - Fresher dacite dk. purple

519 - 541 - EOH - dacite dk purple - no BKa
some limonitized zoned in more altered portions
of core

539 - vein - some BKa lots of Qtz

Hole # BB4

Bearing

Depth

Angle from Horizontal

Scale: 1" = 30'

Project: Bodie Bluff Drilling; Bodie, Calif.

DATE FINISHED:

Logged by Pete [illegible]

Depth in feet	Geochemistry	Rock Type	Geology	Alteration
				12-8

Depth in feet

20, 40, 60, 80, 100, 120, 140, 160, 180, 200, 220, 240, 260

[illegible] epos [illegible] ...vel events. Intense brecciation by a silica-pyrite matrix + oxidation

TRANSITION Argilliz. goes to illitiz. Dacite + PM Bxa visible

Rock Type

CORE MISSING

Py-Silic. Dense rx

Porous vuggy bxa Silic-white matrix w Argill clasts pure Kaolin Sinter like clasts. Blk. pyrite Silica clasts.

Intense Fe oxide staining w/ Argilliz. v. strong overprint.

Illitic alteration + veining is seen as is altered dacite PM Bxa Chalcedonic veins + Fe oxide veinlets.

Geology

0' to 185' Hot Spring deposits of silica, intensely argillized dacite clasts, and upper level veining which are dominated fine grained blk pyrite and abundant brecciation.

48-54' Blk to tannish silicic bxa w/ swirly textures, clasts of waxy silica and argillized wallrx. Fe oxide fracture cut blk bxa and fades the color to a greenish tan amorphous silica rx with patches of blk silica. Zone ends w/ a vein of bxa material that has qtz bands and clasts of banded blk silica. Most clast argillized + stained orange-yellow (FeO).

54-100' The blk pyrite becomes a clast in an intensely argillized breccia, @ 86'-72' "pure" Kaolinite (very soft to the touch) stained FeO.

101-145' White, orangish yellow rx which [illegible] numerous voids created by intense argilliz. [illegible] Brecciation by siliceous matrix was followed by oxidation. Veins of white qtz [illegible] common as are clasts of [illegible] silica. White qtz veins [illegible] to pyritic bxa.

146-185' - Very complicated zone w/

1. pyritic bxas altered to green color
2. Chalcedonic veins w/ x cutting bxa qtz veinlets & swirly banded w/ vugs x cut by Fe oxide.
3. relict zones of hematitic breccias w/ illitic alteration.
4. Argillized - Siliceous deposits of bxa w/ relict chalcedonic clasts
5. Patches of intense "clay" alteration
6. Quick zone changes
7. Many qtz-pyrite brecciation events which are, subsequently oxidized

Alteration

48-54' strong zonation Argilliz. dominant and youngest where silicif is pervasive. Gradation 48 → 54 - oxidizing fractures w/ relict blk pyrite

54-100 - intense ** argillization w/ relict silicification

48-185 The primary alterat is intense (K + low) Silicification, followed by Intense Argilliz which was a produc of oxidation of pervasi fine-grained blk pyr Clasts of dacite which are encompass in silica brecciatio are usually weather out and give the rx a vesicular appear. when preserved the clasts are seen. Fe oxide stained cla

@ depth of 108' it is seen that a "clea banded "vein" is x-cutting argillized, pyrite-chalcedony; dacite clast breccia. (Looks sorta like sinte material). (latest stag

185-267 HW to major vein @ 267-269
rx has intense pervasive illitization w/ white mica
host rx is dacite + PM Bxa, Argillization is
confined to FeOxide veinlets w/ some qtz.
Manganese oxide on fractures is common
Rx is also intensely silicified - K metasomatized @ 250' which
is adjacent to an argillic zone of Fe Oxide - qtz veining.

267-269 - Major vein of milky white qtz - adul
banding w/ very wide (+ 1") banding, very hard
qtz vein, adjacent wall rx @ 273' is soft illitized dacite.

274- K+ zone w/ pervase qtz adul veining + brecciation

12-9

BB3 12-6

357.5 - 384 -

357.5 - 366.5 - dacite relativily fresh silic ?

366.5 - 400 - limonite rich zone w/ lots of qtz veining thus creating BXa some very strong veining @ 371 & (389 - 392)

400 - 404 - good dacite finer grained than usual dacite

404 vein

404 - 408 - FW TO vein w/ Mod fresh dacite

408 - 417 - Dacite vuggy & veined abit one area 413 looks interesting argillized zone

417 - 447 - Vuggy veined & slightly alt dacite

447 - 461 - dacite w/ lim & qtz veining

463.5 - gouge w/ veins matter.

~~463.5 - 465~~ HW

465 - 491.5 - rx becoming propylitized about 465

more patches of limonite green clay or ? very apparent Dk green patches.

491.5 - 504 dacite rx ranges from a fine to coarse texture

Continuation of Page # PAGE 12-10
Hole # BB4

BOX # & FOOTAGE | Condition of CORE | DESCRIPTION

48 TO 55 - zone of dacite replaced by dk sulfide and highly silicified, patches of original color still present, last 1' is bleached w/ little or no mineralization

50 TO 51 - small Bxa zone, flow structures @ 35° to c/A some silicified sulfides & limonite chunks, w/ silicific bleached well rx.

~~55~~ - 56 - gouge zone FeO

56-57 - ~~gougey bleached~~, oxidized zone w/ vein material in a rubble fashion, some sulfides some hematite 58-6

57⁵-78 - limonite stained, argillized, bleached Gouge, some hematic zones, zones of very mild silicification. The hematite zones are bleached Bxa

Vein @ 78, @ 83' vein is very soft, pure clay

@ 79' Bxa w/ hem. 87⁵ to 90 Bxa zone altered w/ hem matrix.

77' Bxa zone w/ hem matrix

A - zone of epithermal banded veins of chalc. some Bxa present w/ sulfide blobs.

@ 100 the rx becomes silicified. rx still heavily bleached., the Bxa becomes hard and is partially preserved

103 Sample

@ 103' - the Bxa can be easily seen, the difference is the specimen has been bleached & oxidize, the silica seems to be found where the matrix was present was matrix strongly [ ] in Si? or was the matrix selectivity replaced by another episode (silicification) The dacite frags seem strongly replaced by lim & K-micas via argill.

chalcedonic clasts end. rx becomes silic., & propyl.

zone of silicified Bxa = 108' to 114, this rx seem baked! Very brittle, (metal sounding - dense)

Interesting!! We find chalc Bxa near structures and has been brecciated by matrix Fe rich

100 to 141⁵ - strong Bxa zone, @ 106 to 141⁵ it is strongly Fe oxidized @ 106 strong veining is evident Silica - Chalcedony infilling, very banded and sulfide rich, most @ 40° to 50° to c/A

Also we noticed that the last phase of mineralization in the veins was a FeO rich clay!!

strongest veining @ 106⁵ to 115'.

@ 111² - Vein ~~[illegible]~~ is xrossed by breccia matrix, there are clasts of vein material in matrix!!

@ 111 a patch of sulfide rich qtz is surrounded by limonitic qtz then by a lt brn qtz, then [illegible] by patches of white

clasts of chalcedony persist until 131'

main structure from 106 to 115'

veins are very vuggy, lots of banded sulfide rich chalcedony, FW has Bxa frags of chalced. HW has a couple

main structures @ 106⁵-107 & @ 111⁵, 112, 115

@ 124² Dk sulfide mineralization is strongly assoc. w/ dk sulfide or magnetite in structures.

Continuation of Page # PAGE
Hole #

1=20' 12-11

BB4

BOX # & FOOTAGE | Condition of CORE | DESCRIPTION

* AN OBVIOUS ZONING w/

ZONE I - chalc. + sulfide silicified to mild silic + limonite

ZONE II mild silic → punky Argillic BLEACHED ZONE

ZONE III epithermal veini + BXa - mod to strong silic, some hard argill.

ZONE IV punky argill. r grading into sub zone 1, of zone fresher rx, more silic. and propylitz. can be noticed - some limonitic staining up to 10' then

ZONE V Propylitized zo very silicified (baked feeling) a zone w/ variable extent 2' to over 20' veins of fine green min. w/ this zone a transition to next zone begins w/ an appearence of sulfides as dissemination of fracture pattern makes up a BXa zone w/ fine sulfide bearing veins very glassy qtz frac present

220
230
240
250
260
270
280
290
297
300
310
320
330
340
350
360
370
380
390
400

Gouge zone w/ qtz veins Possibly assoc w/ them

Rubble using ESTi of banding.

gradational boundary propy- very dotic. similar to hard argill

286.2
290
292
282 - 298 zone of stock worked veins
Veins are small from 40 to c/A to 65-75° to c/A
Not much variance between these intervals
312
313
318 Gouge zone
320.8
291-293 - dissem ends but is phase out zone of strong vugs w/ Bxa + limonite stained qtz xistals
329
331
337
355
357
365

312' well hidden BXa structure

- zone of freshen dacite w/min fractures veins

268.5 - Vein w/ HW strongly argill FW mild arg. for 1' then hard argill for 8' → into the propy zone

283 - 285 zone where DK Brn red matrix is strongly associated w/ qtz !

289.5' - Vein TW = .08-.1' @ 40° to c/A
some minor sulfides in walls

Abruptly ends propy for 2' on FW then propy rx appears @ 291'

290 - 298.5 - zone of veins w/ some Bxa w/ qtz very vuggy areas

299 - 304 - long vein TW = 2-3' TW = .2 to .25'
299 - 301 large vein @ 20-30° to c/A
5' zone starts w/ the main vein then parallel stringers are found FW side
veins are vuggy w/ lim. stains wall rx is (~~[illegible]~~) silic only
the BXa here is caught up in the vein & is also just silicified.
semi fresh Plag + hornblende

stang to mod.
stang
to
veins

fresher zone of dacite appears Some major veins could be found [illegible] in zone V

Zone VI

Fresher dacite may be
FW to a structure
Propylitz ends in this
Zones PX is veined w/
major veins and is silic.

12-12

BB4

100 - 143 - hard argillic type alt. -- Argillized (Bleached then sil. ??
or one phase of alt.

@ 132 disseminated sulfide or magnetite begins to appear no
noticeable.

141[6] - clay w/ limonite ends @ this point. There is
a sudden decrease in FeO gouge + etc.
The rx becomes denser @ this point. The brittleness due
to baking or silic. continues. - rx takes on a greener
tinge. Breccation seems to fade out.

141 - 144 very argillized, dense, silic hard rx, w/ dissem. sulfides, Greenish pinkish

141[6] - structure. layered vein @ 50° to c/a TV = .15
Some black chalc. present near structure

12-13

BB4

141^6-142 - vein

142-145 - dense argillized dacite that is also silicifie

145-146^5 - rx is more vuggy very hard w/ chalcedonic fragm w/ sulfide min. - some minor veins w/ sulf. present

146^5-148 - soft gougy zone possible vein.

148-154 - zone continues but is in bigger pieces

154-158 - zone of epithermal veining w/ lim gouge

158-166 - a very fine BXa or probably highly alt. daci zone is mod. strong. silicified ē highly bleached. some red veining zones of definite Bxaction.

166-169^9 - soft punky zone strong bleach.

169^9-171^8 - vein material qtz ē banded very rubbly.

171^8-173^6 - silicified FW @ 172^5 some chalc w/ sulfides zone ends w/ clay gouge.

173^6-175 - HW to a vein

175-176 - rubbled up qtz vein

176-178^3 - soft bleached zone stained w/ lim.

178^3-184 - zone of hard bleached $\overset{Bxa}{rx}$ w/ frag of chalc. grades into (@ 180) a soft punky zone not very silic.

184-186 - gouge grading into a more dense silic, bleached dacite some minor veins ē fingers of Bxa matrix

186-198.8 - mod silic bleached dacite frags in a zone of BXa the matrix is deep dk red may be mildly argill,

142-198.8 strongly lim. zone.

BB4 2-15

hard argillic minor veining mod-mild lim
198 - 210 - very hard agillized silicified rx

210 - 247 - zone of BXa - very purple matrix, clasts seem a more purple color less bleached, some soft rx - BXa matrix seems more bleached towards argillized zone rx still silicified - more limonite present periodic gouge zones @ 222 & 227.5

→ 247 - 304 on 2nd log sheet

304' - strong parallel veins disappear and other minor vugy areas appear lim stained w/ qtz xoshll Mod-strong silic.

305 - 323 - zone of veins, ~~[illegible]~~ mod. silicified dacite w/ purple color the rx seems to have some disseminate ore magnetite? veins @ 312, 317, @ 50° to c/A large vein @ 318 jumbled rx

Gouge zone @ 320' - some other minor veins present

320 - 323 - Transition zone of dacite color plag may be fresher

323 - 324 - HW of vein @ 324' to 329'
324 - 329 - vein - banded @ 35° to c/A TW = 3' to 4'.
329 FW to vein

330 - 354 - zone of mod-strong silic. dacite lots of limonite bearing qtz veins @ 40° to 85° to c/A & TW < .02'

305 - 340 - minor disseminations in wall rx.
some traceable propylit. green clay? from 399' - 351

312 - vein w/ BXa TW ~ .1 - .15' 70° to c/A

BB4

12-16

305-315 dacite

316-318? vein banded w/ lim.

324.5-329 vein " "

333-355 — fresh veined dacite w/ silic present

354 — rx begining to be argill a bit more

355-380 — the dacite get harder (more silic)

minor veins TW=.01' & shears that are rehealed and contain min. (ex 361'-362)

@ 359 structure does something funny to dacite by way of lim staining one causes the "weathering FRONT." (staining)

banded qtz, not calcite!

@ 356 — great example of veins in the advancing zone carrying mineralization, evidence → strong lim stains assoc. w/ the fractures.

samples @ 355-362

380 TO EOH the detailed log is incomplete, but samples are taken for a later date.

12-17

BB4 Samples BB4

Box 2 $\left\{ \begin{array}{l} 48\text{-}49,\ 49^{5},\ 50,\ 50\text{-}51,\ 52^{7}\text{-}53^{8},\ 53^{8}\text{-} \\ 54\text{-}55^{1},\ 55^{1}\text{-}56^{1},\ 56^{1}\text{-}57^{5} \end{array} \right.$

Box 3 57^{5}-62, 62-67, 67-72, 72-73

Box 4 73-82^{5}, 82^{5}-83, 83-85

Box 5 85-87, 87-93

Box 6 93-97^{6}, 97^{6}-100, 100-104

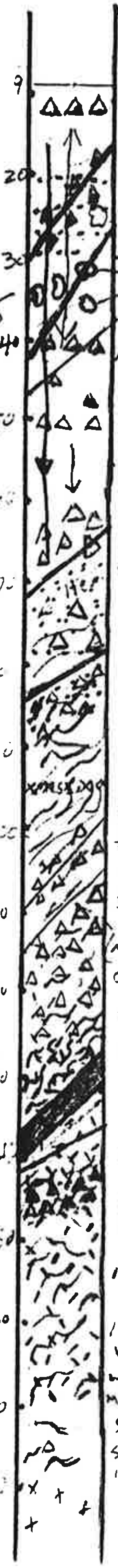
Box 7 $\left\{ \begin{array}{l} 104^{6}\text{-}106,\ 106\text{-}106^{5},\ 106^{5}\text{-}108,\ 108\text{-}109^{5} \\ 109^{5}\text{-}110^{5}\ \ 110^{5}\text{-}111^{5},\ 111^{5}\text{-}114^{8}, \\ 114^{8}\text{-}119,\ 119\text{-}124 \end{array} \right.$

Box 8 124-130, 130-137^{8}

Box 9 137^{8}-141, 141-141^{6}, 141^{6}-142, 142-143

Continuation of Page # PAGE
Hole #

GBZ 12-18

BOX # & FOOTAGE		CONDITION OF CORE	DESCRIPTION
Box 1 silicified zone strong bleaching S H P H mild P S MOD PROP. strong silice 151 strong Propylitic Alt. 169 FRESH Slightly Silic. Dacite Intrusive		Good HEM... 9' to 30' porous sporatic patches Relict patches of sulfides replacing host RX chalcedonic veins w/ limonite @ 32' altered but preserved dacite host. 60-69' sporatic soft bleached ... host rx. 69' Vein TW = 2 w/ propylitized BXa & host rx on HW side 59' to 69' on FW 69 to 79'. on FW hematite ... finely ground ... 69 to 80 ... BXs ... mm ... to .75" (mild-mod) 9 to 80' strong to Mod. bleaching of dacite 80.5 TO 81.8 mild silic. 91' to 136' argillic zone w/ variable degrees 170-140 disseminated sulf. mineral 133-136 - major vein w/ punky HW w/ dissem + stockwork mineraliz. FW strongly silicified some minor veinlets in FW	9 to 70' soft, punky, BXa, w/ lots of open space (9 to 70') strong oxidation very limonitic stained BXa fragments consist of chalcedonic qtz that is clear to white. w/R 22-23 layered vein; w/ chunks of limonite probably relict pyrite (GOSSAN), or other Fe sulfides - very BXaiated w/ massive gaps in rock, very porous material. TW = .20" to .25" 24.5 Hematitic rx porous chalced. rich. 24.5 to 26 porous limonitic rock w/ relict patches of host rx replaced by silvery, dk sulfides → oxidizing to limonite Brecciated rock 9-30 BXa descrip. - porous, host rx dacite is totally altered to kaolinite & limonite, a few areas (25') have host rx heavily replaced by dk sulfide. The dominant fragment are chalced. All feldspar replaced by FeO. 32' large patch of sulfides replacing host rock, rather large chunk of dacite highly altered replaced by limonite & chalced. and bleached dk sulfide. 33' to 46' next page lots of limonite

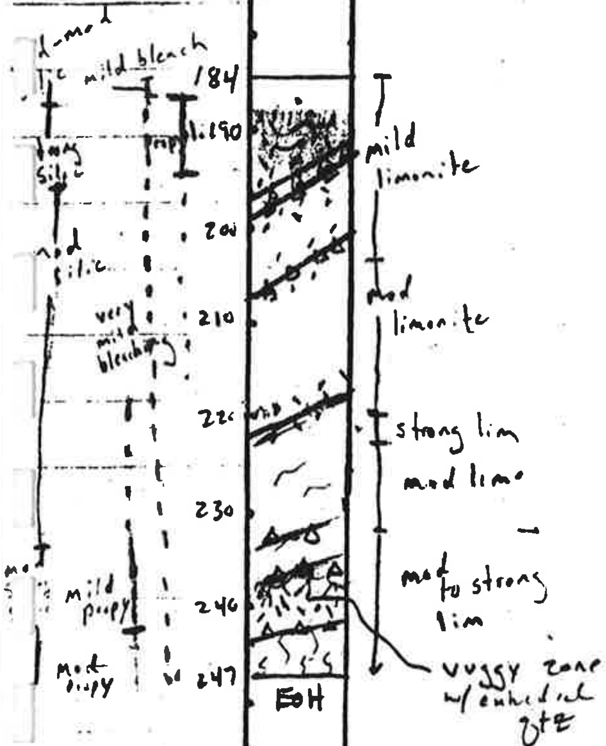
Continuation of Page # PAGE
Hole #

BB2 12-19

Box # 2
FOOTAGE

Condition of Core

DESCRIPTION



@ 210' to 212' Kaolin zones replacing plag.

241 - 243 - bleached zone Bxa on HW

BBZ ✓ 12-22

84 to 85 - large BXA FRAGS can be pieced together, matrix consists of white qtz (kspar?) and hematite. BXA FRAG vary in size from .1' to .01 in dia.
The host rock is altered to sanadine rich rock
rx is mild silicified, bleached hematized (looks like my original sample)

85 to 86 - Bxa zone similar to previous, except rock frag alt varies and ranges from propylitized (silitized?) NON silicic to bleached & silic
all frags are hematized & oxidized

86 to 95 a sporadic zone begining w/ veins of kspar, qtz rich veins of bxa frags of 2nd'ary limonite. patches of dacite strongly argillized (punky), more veining @ 88' @ 40° to c/A TW = .02'
FW has a noticeable oxidized & porous front grades into a bleach zone of dacite (rx green and bleached), fluids must have been Fe, oxidizing fluids, no pyrite in unalt. dacite
88 to 90 a gougy BXa zone, rx very punky
90 to 93 zone of bxa where matrix is qtz and clasts are totally replaced by limonite
93 to 94.5 - tighter bx more matrix material silicified mod and bleached strong (looks almost baked in areas)
lots of limonite
94.5 - 95.0 Missing
95.5 to 97 - large banded, qtz, adul, [illegible] veined TW = .7' to 2.0' 30° to c/A
host RX may be baked. HW strongly bleached, oxidized or hematiz then oxidized, slightly vuggy. some core missing
97.3 to 99 vein continues for [illegible] TW = .3' @ 50° to c/A
BX A frags are dacite, replaced by oxidized Fe fluids + vein material frag zone by hematite halo. [illegible] near HW side silic. HW silicified FW very, bleached, rock is pinkish purple w/ green streaks

BB2 12-23

99' to 130' - zone of sporadic veining, the veins grade by 112 into a very vuggy qtz lined cavity.

3 type of structures present, large zones of vuggy layered ve w/ mega frag. & hematite halos. The 2nd is a zon of finely ground up Bxa frags @ ≅ 45° to c/A. 3rd minor veins @ 65° to c/A & 40° to c/A 180° to each other the parallel set are youngest & are @ 65° to c/A, no real offset of older vein 40° to c/A - stockwork type vein

103.5' veinlets are oxidized host rx is hard pinkish green silic. Bleach, + ?

1st
97-98.5, 103.0, 105.0 @ 40° to c/A
117.5, 127'
2nd
101 to 102.5
103 to 105.5'
111 to 111.8
115 to 117
3rd
105.5-106
108.5 to 110.5'
111 to 115

103.0' - layered vein TW = .1' banded interval of .02' @ 40° to c/A

105.5' - TW = .1' 60° to c/A, banded, FW is Bxa for .3' then a stockwork type veins @ 40 to 50° to c/A - some 105.3 minor veinlest near HW @ 80° to c/A

HW - bleach, silic FW bleached, mild silic.

106.8 - vein w/ Bxa @ 40° to c/A TW = .05' qtz gangue

106.8 - 107.2 - Bxa zone fading into HW side of a vein @

107.2 - angular altered frags on HW side of layered vein

TW = .4' to .6' of zone vein is layered & vuggy TW = .05' @ 95° to c/A

107.2 to 110.5 - zone of no Bxa on FW rock is shot w/ stockwork type veins, rx is pink, mildly silic, punky bleached dacite, a lot less limonite alt. Veins are erratic in dist. vuggy w/ qtz x-stalls. TW = .1' to .01'

110.5 vein TW = .3 to .5' layered vein @ 40° to c/A

HW unaffected sharp, FW is heavily Bxiated, hematized & silicified up to 117'

115-117 - the classical BXA the matrix is mod bleached the frags have undergone [illegible] of bleaching.

BBZ

TW ≈ .2' to .02

33' to 46' chalcedonic Bxa and veins @ 30° to 50° to
Veins are chalcedonic layered w/ open space and limonite
surrounding wall rx is highly bleached and is soft.
large Bxa frag (chalc.) 1" to .01" @ 36' Bxa frags
replaced by dk sulfide not oxidized yet. Very porous in
some areas.

40 to 69' sporatic patches of soft bleached host rock
Some erratic chalc. veins fill

69.5' – chalced. layered vein w/ Bxa of propylitized
dacite TW ≅ .2' @ 50° to c/A

68.0' piece of host rx propylitized, silicified. and
is intruded by small chalced. vein w/ a .05' zone where
vein has powdered rx and silicified it center of vein
is strongly oxidized.

69' Vein TW = 2 w/ propyled Bxa (59 to 79) 10' interval
around each side of vein HW & FW.
silicification for ≅ .5' away from vein. Some
Bxa on FW side elongated chunk

44' to 69' strong mod bleaching of host dacite, fine replaced
Bxa up to structure rock is very bleached and
lacks chalced Bxa frags

69 - 79' propylitized zone w/ Bxa frags from micron
to .75" in diameter, fragments are bleached 1st then
are rimmed by hematite, [illegible] fractures appeared.
Some fragments are as large as 2-3" in diam and seem to
be [illegible] from 72' to 76' smaller frags near vein @ 69 and
from 76 to 80' less than .01'.

@ 77' dk [illegible] sulfides w/ matrix. mild [illegible] Manganese stains

BB2

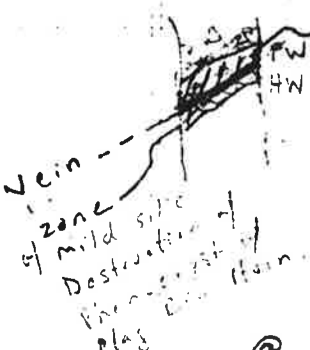
~~80~~ to 83' - Dacite kinda fresh matrix purple color may be K-silicate alt, all plag replaced by (illite)(kaolin.)

81' vein w hard gangue on HW, hematized Bxa on FW grades into a mildly brecciated bleached zone and back into less altered wall rx till @ 83' the Bxa appears.

vein @ 81' @ 60° to c/A TW = .01"

81' to 82' - matrix is purple and feldspars replaced by punky miner. and slightly oxidized.

vein @ ≅ 81.8' - very hard material - milky qtz or adularia, probably both mins present. HW material very euhedral. Has a (mild) silicified HW and a small altered, maybe brecciated, zone of about .15". The FW



Hematized portion of vein, very silicious, Bxa frags, small bands of jasper (hematite rich qtz)

" = .25 to .28 - strong silicification, @ 65° to c/A TW = .01'

HW TWidth = .05' @ 60° to c/A

@

81.8 → 82.3 - white vein material, small .01" zone of Bxa c silic.

82.3 → 82.5 Bxa zone [illegible] strongly silic. Bxa minor Bxa frags all replaced [illegible]

82.5 → [illegible] - Rock is [illegible] [illegible]lized then mod silicified, small [illegible] exist w/ hem. c lim. Bxa veining consists of hem + qtz host rock is [illegible]

82.9 - 83.2 - zone of mod [illegible] rx (dacite) Felds + Bio affected.

83.2 - 83.3 - small zone of Baked rock. mang, silic, limon bleached.

83.3 to 84 zone of Bxa, host rx is mildly silic strongly (argillized?) hematized, BXA is formed [illegible] (Bxa zones from 83.3 [illegible])

BBZ 12-24

113 to 123 - zone of strong Bxa rx is pink & green strongly silicified.
123 to 127 vein become thinner Bxa less prevalent veins @ 40 to 60° to c/A TW = .15' to .01'
@ 120 host rock picking up disseminated pyrite & other sulfides in veins is becoming prevalent up to 128'
127' rock becomes less silicified & more argillic microveinlets still present
132-133 - gougey hematite zone
133-136 large layered vein, TW ≈ 2.3' @ 45 to c/A vuggy w/ hem & lim stained qtz, vein material very porcelainous. HW rx for 6' out is strongly argillized mod silic. very fine grain gangue
FW is strongly silic. & not very argillized for 136 to 13
the rock is intruded by small vuggy bxaited qtz veins
136 - 138 small porcelainous vein @ 60° to c/A TW = .02'
2 small mineralized veinlets present.

90 to 120 rocks are strongly argillized
Alt. 120 to 127 mod to mild bleaching (arg., etc)
127 to 133 strong agill. punky rx.
vein → 136 → 175 silicified rx.
138 → 141 un brecciated area of less bleached rx
141 → 150 Bxa zone HW to a lime gouge (orange) zone TW = .2'
FW is ~~[illegible]~~ mod bleached, brittle silic. disseminatated mineralization
143 - 150 - Argillized, limonitized zone
150 - 153 - Argillic → Propylitic overlap zone

BBZ 12-25

152-170 The dissemination mineralization is strongest, in the propylitic zone large amount of stockwork veining micro veinlets, lots of gray, silver, & gold sulfides in veins & as replacement bodies in host dacite, vein controlled

120-152 shows some good signs of dissemitated type sulfides

170-184 - rock is less altered, plagioclase is more fresh so is matrix in Dacite, some oxidized zones less silicified, no propylitization. Fresh Dacite w/ minor qtz VEINS.

184-187 — Ditto some FeO

187-194 — some strong propylitic alt some bleaching disseminated mineralization strongly associated w/ green min.

191 small bleached zone

194 - vein w/ Bxa **NO** bleaching of bxa frag - propylit., FeO not lots of dissplacement of frag milky qtz ~~[illegible]~~ gangue no real disseminations for small zone @ T.W. = .3'

structure giving rise to dissemination in wall rx
194, 196, 204', 220' veins have Bxa un bleached are layered 60° to c/A vuggy veins but not abundant. TW .2' to .3'

194 -233 - Lots of fresh slightly silic dacite Felds slightly alt.

233-240 mild-mod propyl., rx becomes vuggy w/ orange clay gouge @ 232 & 236 som

240-247 - 242 Bxa vein 60° to c/A TW = .15' strong oxidation

242-247 - Fresh, mild silic, purple Dacite, plag unaltered to slightly alt may have some [illegible] silicate alt.

CORE Logging DATE – 8/21/83 Location: 12-26

Scale 1' = 20" HOLE # BB-2 ∠ to HORIZ

Box # / Footage: 0

Box # / Footage	Depth	Condition	Structures, Rx Description, mineralization Veins WHERE SAMPLED AREAS OCCUR (Footage, sample #,
9' st 9' / 9-30' BOX 1	10	Broken but well organized	BC4 / BC1 strongly Fe oxided zone from 9' to 31' – grading into a mineralized structure very strong Bxa of limonite stained clasts and chalcedonic fragments and a punky cream colored mine BC2 samples # BC 1 Through ..., ..., BC 4, BC 5, BC6, ...
30 – 44' BOX 2	30	Good / last 2' broken Rounded chunks	@ 20' Bxa has Fe in form of Fe_2O_3 BC3 Strongly hematized for interval 18' to 29 some limonite present
44' / BOX 3 / 44' to 69'	40 / 50 / 60	FAIR Broken core	@ 30 to 32' there is a sulfide, silicious (@ 55-60° to c/A) vein, TW = .7', HW consist of highly (BC6) bleached and altered dacite BC 5 FW chalcedony limonized, silicified, bleached Bxa and altered rx to past 70'
69	70		@ 30.5 hanging wall vein irregular but mineralized
			30.6 to 37' Bxa rx w/ limonite highly bleached BC 7 / BC 8
	90		37.0 a very very interesting Bxa vein chalc. w/ limonite on HW (Bxa) TW = 1.5" DK mineralized Bxa on FW side has bleach rx in a matrix rich in Hematite both zones ... of = thickn sample BC 9
	110		38.0 to 44 – erratic chalc. veins w/ Bxa that is strong bleached broken core 39' to 58" BC9 very limonitic stained some erratic pod of mineralization DK sulfide
	120		44 to 57' very punky oxidized zone BC 12 57.5 57' silicified Bxa zone BC13 58.5 to 70' BC 14 Bxa that is highly bleach & illitizized
	140		BC15 This grades into a hematite rich Bxa (70 to 73') Red altered Bxa 70 to 79' highly bleached & oxidized zone BC 16 some minor sprise, Red Bxa.
	160		79 to 85 Mod. altered dacite some minor BC 17 qtz veins
	180		

Chalcedonic Bxa = Bxa 1
EBBA xa = BXA 2
Vein Brecciation = BXA 3

KEY

12-27

BB2

mineralized or non mineralized vein

BXa 1 ; chalcedonic BXa , highly silicified Bxa ; all related to veining.
upper levels HSB

BXa 2 ; BXa w/ a hematitic matrix - adul, qtz, hem - EBBX and may have a variety of textures, chemical compositions, degrees of alteration, and localities. This may be equivalent to a hydrothermal brecciation that is pre-vein in age.

BXa 3 ; a Bxa found next to a vein or incorporated w/i a vein.
white matrix BXA
Hydrothermal $\xrightarrow{VB}$ clearly vein related

disseminated ~~mineralization~~ Pyrite

mineralized or non mineralized veinlets, may make up a matrix for BXa 3 , most represent 2ndary $FeOH_3$ veinlets.

Gouge zone, consisting of hematite and or limonite

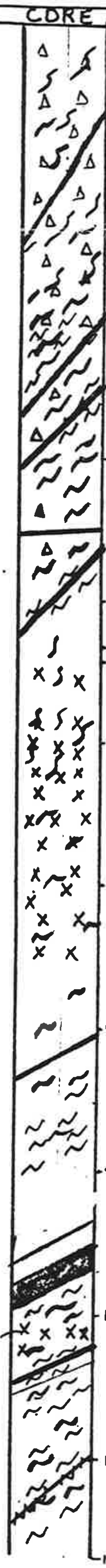
DRILL HOLE : BB2

Scale [redacted]
1" = 10'

12-28

	Pyritization	HEMATIZATION	Limonitization	ALTERATION NOTES	Silicification	Propylitization	K-FELDSPATH	Seritization	Argillization
	-	- 4 @20'	4-5	1 WEAKEST 2 3 4 5 STRONGEST ? possible	3	-	-	-	5
	-	2	1		4	-	-	-	1-5
	-	-	1		5	-	-	-	5
	-	-	5		2-5	-	-	-	5
	-	-	1-4		3-5	1 1?	Present @-47' ??		2-5
	-	-	4		1	-	-	-	5+
	-	-	2		2-5	-	-	-	3-5
			3		2	2?	-	-	5+
	-	-	3		2	-	-	?	1-4
	-	-	3		3	-	-	?	1-4
	-	*	5	* - found in BXA (vein) matrix	3-5	?	-	?	1-3
	-	-	3-4	origin of green mineral argilliz. or propyl?	3-5	?	-	?	3-4
	-	-	5		4	?	-	?	4
*	-	-	5	* manganese staining	5	-	-	-	5
MANGANESE	-	5 where micro veinlets occurs	5		3-5	Green mineral	Possible rx looks pink	Green mineral	2-4

CORE



FOOTAGE, DESCRIPTION #

18'

19' vein of white chalcedony, limonite, dk sulfides TW=3-4", 30° to c/A, sporatic chalcedonic veining present

9-29' Possible lake sed Bxa @ 9.5'

30-33' - BXA 3, lots of dk sulfide some of it has gone to limonite.

35' - chalcedonic (white) vein TW ≅ 1"

37-38' - Zoned chalcedonic vein, host rx is strongly argillized & silicified, lots of limonite present, TW = 1.5" @ 40° to c/A ½ vein is white chalcedony w/ dk silic bxa ½ vein is a dk brn siliceous matrix w/ clasts of argillized dacite some of it sucks up limonite

45' - flat banded vein w/ qtz, host rx is bleached and Brecciated and silicified relic dacite can be identified but has pods of argillization, vein has a greenish tint

≅ 50' - ~~ch~~ white chalcedonic vein TW = > 2" host rx may be propylitized, bleached, and silicified, lots of micro veining in HW (MOYLE FW)

58-75

58-65 - rx is highly silicified, host rx is totally replaced by silica and is fractured w/ limonite infilling

63-75' - Hydrothermal bxa, the clasts are bleached by matrix the the whole rx is bleached and silicified limonite prevalent. Matrix is bleached red

75 - rx is highly argillized & possibly propylitized + silicified each fracture has lots of limonite.

78' - dacite - all plagioclase is argillized? or seritized lots of limonite staining some of it silicified, No biotite - hornble-

79-80' - argillized dacite w/ limonite - clay [illegible]

81' - vein TW = > 3"? @ 60 to c/a hard qtz w/ hematite, HW mildly argillized FW - strongly argillized?

81-85 - dacite w/ argillized ~~and~~ seritized [illegible] no mafics, some green minerals

85-90 - Bxa - matrix is clear qtz w/ hematite rimming clasts. Clasts are argilli silicified + drenched w/ limonite, fluids hig oxidizing Fe rich

95-97 - massive vein TW > 2" @ 60° to c/A white chalcedony, has a late period of fracturing w/ limonite infilling micro vein of radiating chalcedony TW = .4" @ Host rx was argillized, + green clay mineral was a product of this event besides bleaching? the rx was strongly silicified. The vein caused a halo of limonite. Vein not stable??

95-117

Bxa - matrix very limonitic on the whole rx is argillized w/ green mine prevelent rx is also silicified.

104 - "Baked" vein, banded epithermal chalcedonic TW = .8' - Host rx is highly argillized, strongly silicified + strongly limonitized m[illegible]ese staining

104-117 - BXA related to veining matrix ranges from clear qtz to limonite host rx is argillized to a pink color, green minerals present. lots of micro veinlets w/ limonite.

DRILL HOLE : "B02 Pg 2

Scale 1" = 10'

12-29

	Pyritization	HEMATIZATION	Limonitization	Silicification	Propylitization	K-FELDSPATH.	Sericitization	Argillization
	Disseminated 3	—	1	4-5	3-5	4-5	Possible	0-1½
	-	-	3	5 ↓ 1	-	-	-	4-5
	-	5	3	-	-	-	-	5
	VEIN	-	3	5 VEIN	-	-	-	1-2
	4	-	-	5	-	4	?	-
	4	-	4	5	-	4	?	-
	4	-	-	5	-	4	7	-
	-	-	1	4	1	3	?	-
	1	-	-	4	2	4	?	-
	5	-	1	5	5	4 ?	?	2-4 around veinlets
	1	-	-	5	2	1 ?	?	-
	-	-	1	5	0-1	-	?	-
	-	-	2	5+	1	-	?	-
*	-	-	2	4	-	-	?	-
	-	-	1	5	1	-	?	-

ALTERATION NOTES

Vein Paragenesis @~140'

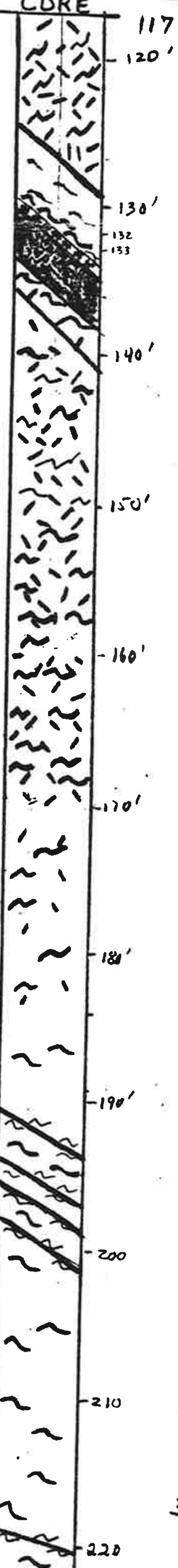
1. Propylitic oldest
2. K-metasomitism
3. Argillic – bleaching
4. Silicification, Mineralization (qtz - sulfide, adularia) vein & disseminated (BXA)
5. oxidation producing MnO, FeO + clays or zeolites from propylitic assemb.

Kfeld propylit. {Silicification Pyritization} Silicification bleaching.

* - soft clay mineral, white + pink, is a vein w/ clasts of (altered?) dacite. Similar to Bodie tunnel

This bxa is vein cutting BXA not hydro bxa

CORE



FOOTAGE, DESCRIPTION

117-127' - BXA 3, the matrix is a sulfide rich qtz with green mineral. Some secondary minerals some adularia present, This has produced a disseminated mineralization in the K-metasom. dac.

127' - vein that terminates disseminated portion of core, @ 50° to c/A. Vein is about TW= 1" wide, it carries qtz w/ lots of boxwork vugs filled w/ Fe. FW is silicified locally but phases out, argillization is more prevalent away from FW.

127-132 - silicified - argillized dac. w/ micro veinlets of limonite

132-133 - Hematite gouge, w/a previous BXA zone, clasts w/ rounded edg.

133-136 - Banded vein, T.W. 1-2', @ 50° Qtz, chalcedony w/ vugs + euhedral qtz crystals capped w/ a coating of FeO. FeO occurs between bands, dk sulfides present, Adularia?

136-140' - FW - silicified, oxidized bleached.

140-146 - BXA w/ qtz matrix - (veining w/ disseminated sulfides, clasts have sulfides dissem + are K-metasom + sil.

146-150 - oxidized, Fe stained BXA minor gouge.

150-158 - BXA w/ qtz matrix same as 140-146'

158-160' - fresher dacite, plag is altered to sericite?, a hornblende phenocryst is altered to sericite? + green mineral no disseminations.

160-162 - rx contains green minerals + is silicified plag is gone + some disseminated sulfides.

162-170
BXA w/ veinlet qtz - pyrite matrix
rx is dense + propylitized
lots of disseminated pyrite
vugs are present w/ euhedral qtz coated

170-184 Fresher dacite, plag outlines well preserved. Mafics altered to v. dk phase. Propylitization + pyritiz occur in & adjacent to veinlets

184-210 - qtz veining w/ incorporated BXA - plag are altered and rx is silicified. TW= .1" to 3" @ 50-60°

210-212 - vein of white punky mineral may be alteration of adularia, some qtz, clasts of silicified sericitized dacite.

212-220 - lot of dacite w/ veinlets

220 - vein @ 60° to c/a

DRILL HOLE : BB2 Pg 3

Scale [redacted] 1" = 10'

12-30

Pyritization	HEMATIZATION	Limonitization	ALTERATION NOTES	Silicification	Propylitization	K-FELDSPATH.	Seritization	Argillization	CORE	FOOTAGE
			[redacted]							220
-	-	2		5	1-2	-	?	-		230
-	-	5 4 3 2		5	?	-	?	5 4 3 2 1		240
-	.01	1		3	?	-	?	-		247

EOH

FOOTAGE, DESCRIPTION #

220-233 - micro veined dacite, silicified some DXA in veinlets, vugs have limon coating.

233 - gouge zone

233-242 - silicified + bleached + limonitized zone as bleaching decreases so does amt of limonite

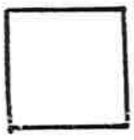
242-247 EOH - Fresh to slightly altered dacite, some v. minor hemat Feldspars are fresh to altered, (serie mafics are altered a bit.
some micro veins w/ limonite in

BB4
BB3

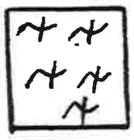
KEY

12-31

Qtz - Adul. vein w/ ± white matrix brecciation
Vein may have interbands of Fe oxide Hydrated stained Clay ± w/ dacite clasts.

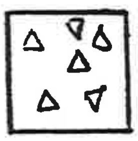


Dacite



white Matrix Bxa (qtz-adul.)

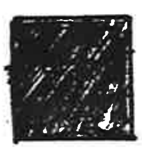
Brecciation, Argillization, Silicification, + Pyrite (f.g.) ± other types of alteration
Clasts of vein material, waxy qtz, dacite + PM BXA.



Puple Matrix Breccia Hematite + Silica ± Adul.

— Vein from upper levels chalcedonic in character ~~plus~~ intense ~~brecciation~~ w/ a variety of clasts.
~~Supper~~ (Superimposed by argillic event)

Pyrite both disseminated cubes + fine grained blk in upper levels + bands w/ veins @ depth



Hydrated Fe Oxide Fracture or staining

Argillization

Illitization

Hematization

Lm —

APPENDIX 13:

CONFIDENTIAL DATA

PROVIDED BY GALACTIC RESOURCES

APPENDIX 13. CONFIDENTIAL DATA PROVEDED BY GALACTIC

COMPANY	ORIGINAL SOURCE	DATE OF ORIGINAL	SCALE OR DISTANCE	
GALACTIC	HOMESTAKE	11/86	9975	Cross section NE a
GALACTIC	HOMESTAKE	2/86	9950	Cross section NE a
GALACTIC	HOMESTAKE	2/86	9900	Cross section NE a
GALACTIC	HOMESTAKE	2/86	9875	Cross section NE a
GALACTIC	HOMESTAKE	12/86	9775	Cross section NE a
GALACTIC	HOMESTAKE	2/86	9750	Cross section NE a
GALACTIC	HOMESTAKE	2/86	9800	Cross section NE a
GALACTIC	HOMESTAKE	1/87	9675	Cross section NE a
GALACTIC	HOMESTAKE	11/86	9600	Cross section NE a
GALACTIC	HOMESTAKE	2/86	12450	Cross section NE a
GALACTIC	HOMESTAKE	2/86	12250	Cross section NE a
GALACTIC	HOMESTAKE	2/86	12050	Cross section NE a
GALACTIC	HOMESTAKE	2/86	11950	Cross section NE a
GALACTIC	HOMESTAKE	2/86	11900	Cross section NE a
GALACTIC	HOMESTAKE	2/86	11850	Cross section NE a
GALACTIC	HOMESTAKE	2/86	11750	Cross section NE a
GALACTIC	HOMESTAKE	2/86	11625	Cross section NE a
GALACTIC	HOMESTAKE	2/86	11550	Cross section NE a
GALACTIC	HOMESTAKE	2/86	11500	Cross section NE a
GALACTIC	HOMESTAKE	2/86	11475	Cross section NE a
GALACTIC	HOMESTAKE	2/86	11450	Cross section NE a
GALACTIC	HOMESTAKE	2/86	11425	Cross section NE a
GALACTIC	HOMESTAKE	2/86	11350	Cross section NE a
GALACTIC	HOMESTAKE	2/86	11300	Cross section NE a
GALACTIC	HOMESTAKE	2/86	11225	Cross section NE a
GALACTIC	HOMESTAKE	7/87	11900	Cross section NE e
GALACTIC	HOMESTAKE	7/87	9400	Cross section NE e
GALACTIC	HOMESTAKE	7/87	9600	Cross section NE e
GALACTIC	NERCO	1984	1" = 400'	Surface rock alteration map
GALACTIC	NERCO	1984	1" = 400'	Geologic map of the Bodie property
GALACTIC	BODIE CONSOLIDATED	no date	1" = 2000'	Regional topographic map
GALACTIC	HOMESTAKE	1986	1" = 500'	Generalized location map, geologic map and cross section
GALACTIC	GALACTIC	no date	no scale	Geologic/Alteration map (quartz-sericite-pyrite)
GALACTIC	GALACTIC (?)	no date	no scale	Rotary drill hole locations, 4N-200 and 1N with Bodie State Park and J. Boynton claims
GALACTIC	GALACTIC	1989	1" = 200'	Topographic and geologic map of the South part mining district (Oscar Hershery, 1931)
GALACTIC	GALACTIC	no date	no scale	Aerial Photograph C. No control points
GALACTIC	GALACTIC	no date	no scale	Aerial Photograph D. No control points
GALACTIC	HOMESTAKE	1986	1" = 500'	Topographic map
GALACTIC	GALACTIC	1989	1" = 200'	Topographic and geologic map of the North part mining district
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	Map of Bulwer tunnel (faded)
GALACTIC	STANDARD CONSOLIDATED	1882	1" = 40'	Property and mine workings projection map
GALACTIC	GALACTIC	no date	no scale	Aerial Photograph B. No control points
GALACTIC	GALACTIC	no date	no scale	Aerial Photograph A. No control points
GALACTIC	GALACTIC	1989	1"-200'	Drill hole index plan map
GALACTIC	GALACTIC	1989	no scale	Drill hole down-hole projections and assay values (original was colored)
GALACTIC	GALACTIC	1989	no scale	Vein map of Bodie Bluff and Standard Hill
GALACTIC	GALACTIC	1988	no scale	Proposed drill holes and visibility corridors
GALACTIC	GALACTIC	no date	no scale	Proposed core holes
GALACTIC	HERRERA	1986	1" = 400'	Geologic map of Bodie Bluff area
GALACTIC	GALACTIC	no date	no scale	Annotated proposed drilling map
GALACTIC	GALACTIC	1988	no scale	Annotated proposed drilling map with claim boundaries
AMAX	SIERRA MINES	1946	no scale	Index map to surface workings with projection of underground workings
AMAX	SIERRA MINES	1946	none	Ore reserve tables (2) by McClusky
AMAX	SIERRA MINES	1946	1" – 40'	Bodie Shaft and Mine Workings: Sections
AMAX	SIERRA MINES	1946	1" = 40'	Composit transverse section of Standard Hill
AMAX	SIERRA MINES	1945	1" = 40'	Vertical section of Harrington tunnel with assay values
GALACTIC	GALACTIC	1986	1" = 200'	Digital map projection of drill holes 55000-50500 and 59500-5500
GALACTIC	McCLUSKY	1946	1" = 200'	Composit vertical projection through Bodie Bluff and Standard Hill
GALACTIC	HOMESTAKE	5/85	1" – 400'	Composit underground assay plan map
GALACTIC	HOMESTAKE	no date	no scale	Enlargement of assay plan map for underground workings
GALACTIC	TREADWELL-YUKON	1031	1" = 40'	J.E. Norberg map of the Harrington tunnel

APPENDIX 13. CONFIDENTIAL DATA PROVEDED BY GALACTIC

COMPANY	ORIGINAL SOURCE	DATE OF ORIGINAL	SCALE OR DISTANCE	
	SIERRA MINES	1946	1" = 40'	Ore grade map projection of Bulwer, Union Pacific, Con Pacific tunnels and Bird's Nest
GALACTIC	SIERRA MINES	1946	1" = 40'	Ore grade section of Bulwer, Union Pacific, Con Pacific tunnels and Bird's Nest
GALACTIC	SIERRA MINES	1946	1" = 40'	Ore grade map of the Harrington Tunnel and Summit cross cut
GALACTIC	SIERRA MINES	1946	1" = 40'	Ore grade map of the Lower and Upper Whitney and Davis tunnels
GALACTIC	SIERRA MINES	1946	1" = 40'	Ore grade map of Bodie Tunnel
GALACTIC	SIERRA MINES	1946	1" = 40'	Ore grade map of Tioga mine
GALACTIC	SIERRA MINES	1946	1" = 40'	Ore grade map of New Standard and McClinton tunnels
GALACTIC	unknown	undated	no scale	Vein projections for Standard Hill
GALACTIC	NERCO	1984	1" = 400'	Dump index map
GALACTIC	SEARCHLIGHT	1991	1" = 50'	Longitudinal Section #1
GALACTIC	SEARCHLIGHT	1991	1" = 50'	Longitudinal Section #2
GALACTIC	SEARCHLIGHT	1991	1" = 50'	Longitudinal Section #3 (no copy of #4 was obtained)
GALACTIC	SEARCHLIGHT	1991	1" = 50'	Longitudinal Section #4
GALACTIC	SEARCHLIGHT	1991	1" = 50'	Longitudinal Section #5
GALACTIC	GALACTIC (?)	no date	1" = 50'	Section 4N + 200
GALACTIC	TERRA SENSE	1989	1:24000	Magnetic contour map A
GALACTIC	TERRA SENSE	1989	1:24000	Magnetic contour map B
GALACTIC	TERRA SENSE	1989	1:24000	Magnetic contour map C
GALACTIC	TERRA SENSE	1989	1:24000	Flight line map
GALACTIC	TERRA SENSE	1989	1:24000	Magnetic lineament map
GALACTIC	NERCO	1984	1" = 400'	Dump sample maps, sample location map with annotated Homestake surface samples
GALACTIC	MONO COUNTY	1880	can't read	Bodie townsite survey (faded)
GALACTIC	HERRERA	1988	1" = 400'	Surface workings and access tunnel projections (from Chesterman base)
GALACTIC	GALACTIC	undated	no scale	Bodie townsite circa 1985
GALACTIC	SIERRA MINES	1946	1" = 200'	South half of Standard Hill: cross sections index
GALACTIC	SIERRA MINES	1946	1" = 40'	Standard Hill sampling map: Bulwer, Union Pacific, Con Pacific tunnels + Birds next level
GALACTIC	SIERRA MINES	1946	1" = 200'	Composite vertical vein projections of Bodie Bluff and Standard Hill by McKlusky
GALACTIC	GALACTIC	no date	1" = 100"	Aerial mapping topographic map #100-1a
GALACTIC	GALACTIC	no date	1" = 100"	Aerial mapping topographic map #100-1b
GALACTIC	GALACTIC	no date	1" = 100"	Aerial mapping topographic map #100-2
GALACTIC	GALACTIC	no date	1" = 100"	Aerial mapping topographic map #100-3
GALACTIC	GALACTIC	no date	1" = 100"	Aerial mapping topographic map #100-5
GALACTIC	GALACTIC	no date	1" = 100"	Aerial mapping topographic map #100-6
GALACTIC	GALACTIC	no date	1" = 100"	Aerial mapping topographic map #100-7
GALACTIC	GALACTIC	no date	1" = 200'	Aerial mapping topographic map #200-1
GALACTIC	GALACTIC	no date	1" = 500'	Aerial mapping topographic mapping base map
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	J.E. Norberg, map of Bodie mine
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	J.E. Norberg, map of Harrington tunnel
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	J.E. Norberg, map of Texas, McClinton and New Standard tunnels
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	J.E. Norberg, map of Union Pacific and Bulwer tunnels
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	J.E. Norberg, map of Con Pacific tunnel
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	J.E. Norberg, map of Hobart tunnel
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	J.E. Norberg, map of Lower Hobart tunnel
GALACTIC	HOMESTAKE	7/87	12050	Cross section NE e
GALACTIC	HOMESTAKE	7/87	12450	Cross section NE e
GALACTIC	HOMESTAKE	7/87	10150	Cross section NE e
GALACTIC	HOMESTAKE	12/86	9975	Cross section NE 1-d
GALACTIC	HOMESTAKE	7/87	9775	Cross section NE e
GALACTIC	HOMESTAKE	12/86	9775	Cross section NE 1-d
GALACTIC	HOMESTAKE	7/87	9975	Cross section NE e
GALACTIC	HOMESTAKE	12/86	9975	Cross section NE d
GALACTIC	HOMESTAKE	?	10175	Cross section NE e
GALACTIC	HOMESTAKE	12/86	9600	Cross section NE 1-d
GALACTIC	HOMESTAKE	7/87	9400	Cross section NE e
GALACTIC	HOMESTAKE	7/87	9675	Cross section NE e
GALACTIC	HOMESTAKE	1/87	9675	Cross section NE 1-d
GALACTIC	HOMESTAKE	12/86	9600	Cross section NE d
GALACTIC	HOMESTAKE	12/86	9900	Cross section NE 1-d
GALACTIC	HOMESTAKE	12/86	10375	Cross section NE d
GALACTIC	HOMESTAKE	12/86	10375	Cross section NE 1-d
GALACTIC	HOMESTAKE	7/89	9900	Cross section NE e
GALACTIC	HOMESTAKE	12/86	9950	Cross section NE 1-d
GALACTIC	HOMESTAKE	12/86	9950	Cross section NE d
GALACTIC	HOMESTAKE	7/87	9950	Cross section NE e
GALACTIC	HOMESTAKE	?	11425	Cross section NE ?
GALACTIC	HOMESTAKE	12/86	10600	Cross section NE 1-d
GALACTIC	HOMESTAKE	12/86	10600	Cross section NE d
GALACTIC	HOMESTAKE	2/86	10200	Cross section NE d
GALACTIC	HOMESTAKE	2/86	10200	Cross section NE 1-d
GALACTIC	HOMESTAKE	12/86	10175	Cross section NE 1-d
GALACTIC	HOMESTAKE	12/86	10175	Cross section NE d
GALACTIC	HOMESTAKE	7/87	10150	Cross section NE e
GALACTIC	HOMESTAKE	7/87	10050	Cross section NE e
GALACTIC	HOMESTAKE	7/87	9675	Cross section NE e
GALACTIC	HOMESTAKE	7/87	9775	Cross section NE e
GALACTIC	HOMESTAKE	7/87	11850	Cross section NE e
GALACTIC	HOMESTAKE	2/86	11000	Cross section NE a
GALACTIC	HOMESTAKE	2/86	10150	Cross section NE a
GALACTIC	HOMESTAKE	2/86	10075	Cross section NE a
GALACTIC	HOMESTAKE	12/86	10050	Cross section NE a
GALACTIC	HOMESTAKE	2/86	10000	Cross section NE a

APPENDIX 13. CONFIDENTIAL DATA PROVEDED BY GALACTIC				
COMPANY	ORIGINAL SOURCE	DATE OF ORIGINAL	SCALE OR DISTANCE	
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10100	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10200	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10300	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10400	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10500	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10600	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10700	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10800	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10900	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11000	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11100	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11200	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11300	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11400	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11500	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11600	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11700	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11800	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11900	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	12000	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	12100	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	12200	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	12300	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	12400	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	12500	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	12600	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	8900	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	9000	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	9100	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	9200	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	9300	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	9400	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	9500	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	9600	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	9700	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	9800	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	9900	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	10000	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	10100	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	10200	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	10300	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	10400	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	10500	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	10600	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	10700	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	10800	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	10900	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	11000	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	11100	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	11200	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	11300	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	11400	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	11500	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	11600	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	11700	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	11800	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	11900	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	12000	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	12100	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	12200	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	12300	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	12400	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	12500	Cross Section @ 120 degrees
AMAX	GALACTIC/SEARCHLIGHT	1991	12600	Cross Section @ 120 degrees
GALACTIC	GALACTIC (?)	no date	1" = 500'	Claim map with topography
GALACTIC	GALACTIC	1988	1" = 200'	Proposed drill holes and visibility corridores
GALACTIC	HOMESTAKE	1986	1" = 500'	Index map to cross sections 7,500 to 13,000
GALACTIC	GALACTIC		1" = 500'	Digital claim map, BCM claims
GALACTIC	HOMESTAKE	1986	1" = 500'	Land status and claim map
GALACTIC	HOMESTAKE	1986	1" = 500'	Land status and claim map with topography
GALACTIC	GALACTIC (?)	no date	1:24000	Claim map and geochemical/geological survey area
GALACTIC	HOMESTAKE	1986	1" = 500'	Lode claim map, NLM 1 to 42
MILLER	HOMESTAKE	1986	1" = 1000'	Surface rock sample map (reduction) for gold
MILLER	HOMESTAKE	1986	1" = 1000'	Surface rock sample map (reduction) for arsenic
MILLER	HOMESTAKE	1986	1" = 1000'	Surface rock sample map (reduction) for antimony
MILLER	HOMESTAKE	1986	1" = 1000'	Surface rock sample map (reduction) for silver
MILLER	HOMESTAKE	1986	1" = 1000'	Surface rock sample map (reduction) for mercury
MILLER	HOMESTAKE	1986	1" = 1000'	Surface rock sample map (reduction) for thallium
MILLER	HOMESTAKE	1986	1" = 1000'	Surface rock sample map (reduction) for zinc
MILLER	HOMESTAKE	1986	1" = 1000'	Surface rock sample map (reduction) for sample numbers
GALACTIC	GALACTIC	1988	no scale	Bodie Park Map

APPENDIX 13. CONFIDENTIAL DATA PROVEDED BY GALACTIC

COMPANY	ORIGINAL SOURCE	DATE OF ORIGINAL	SCALE OR DISTANCE	
AMAX	GALACTIC	1989	13000	Cross section
AMAX	GALACTIC	1989	12900	Cross section
AMAX	GALACTIC	1989	12800	Cross section
AMAX	GALACTIC	1989	12700	Cross section
AMAX	GALACTIC	1989	12600	Cross section
AMAX	GALACTIC	1989	12500	Cross section
AMAX	GALACTIC	1989	12400	Cross section
AMAX	GALACTIC	1989	12300	Cross section
AMAX	GALACTIC	1989	12200	Cross section
AMAX	GALACTIC	1989	12100	Cross section
AMAX	GALACTIC	1989	12000	Cross section
AMAX	GALACTIC	1989	11900	Cross section
AMAX	GALACTIC	1989	11800	Cross section
AMAX	GALACTIC	1989	11700	Cross section
AMAX	GALACTIC	1989	11600	Cross section
AMAX	GALACTIC	1989	11500	Cross section
AMAX	GALACTIC	1989	11400	Cross section
AMAX	GALACTIC	1989	11300	Cross section
AMAX	GALACTIC	1989	11200	Cross section
AMAX	GALACTIC	1989	11100	Cross section
AMAX	GALACTIC	1989	11000	Cross section
AMAX	GALACTIC	1989	10900	Cross section
AMAX	GALACTIC	1989	10800	Cross section
AMAX	GALACTIC	1989	10700	Cross section
AMAX	GALACTIC	1989	10600	Cross section
AMAX	GALACTIC	1989	10500	Cross section
AMAX	GALACTIC	1989	10400	Cross section
AMAX	GALACTIC	1989	10300	Cross section
AMAX	GALACTIC	1989	10200	Cross section
AMAX	GALACTIC	1989	10100	Cross section
AMAX	GALACTIC	1989	10000	Cross section
AMAX	GALACTIC	1989	9900	Cross section
AMAX	GALACTIC	1989	9800	Cross section
AMAX	GALACTIC	1989	9700	Cross section
AMAX	GALACTIC	1989	9600	Cross section
AMAX	GALACTIC	1989	9500	Cross section
AMAX	GALACTIC	1989	9400	Cross section
AMAX	GALACTIC	1989	9300	Cross section
AMAX	GALACTIC	1989	9200	Cross section
AMAX	GALACTIC	1989	9100	Cross section
AMAX	GALACTIC	1989	9000	Cross section
GALACTIC	HERRERRA	1985	1" = 400'	Bodie Bluff sample location map
GALACTIC	GALACTIC	1996	1" = 400	Wall Rock Alteration
GALACTIC	HOMESTAKE	no date	no scale	Vein Projections
GALACTIC	GALACTIC	1986	1" = 200'	Vein projections and topographic map
GALACTIC	GALACTIC	1989	no scale	Vein projections Bodie Bluff-Standard Hill
GALACTIC	GALACTIC	no date	1" = 200	Vein projections in area of New Standard and Tioga shafts
GALACTIC	WRG, UNKNOWN	1964	1" - 500'	Aurora Mining District, geologic map
GALACTIC	UNKNOWN	1964	1" = 500'	Aurora Claim Map
GALACTIC	UNKNOWN	no date	1" = 500'	Aurora cross sections
GALACTIC	GALACTIC	1991	8500	Standard Hill Plan Map of ore blocks
GALACTIC	GALACTIC	1991	8400	Standard Hill Plan Map of ore blocks
GALACTIC	GALACTIC	1991	8800	Bodie Bluff Plan Map of ore blocks
GALACTIC	GALACTIC	no date	8700	Bodie Bluff Plan Map of ore blocks
GALACTIC	GALACTIC	no date	1" = 200'	Bodie Bluff Geologic Map
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	Davis Tunnel mine map
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	Lower Whitney mine map
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	Upper Whitney mine map
GALACTIC	GALACTIC	1988	1" = 200'	Cross section index map 13000-8500
GALACTIC	GALACTIC	1989	1" = 200'	Geology and alteration map, north part of district
GALACTIC	STANDARD CONSOLIDATED	1890's	1" = 40'	Vein projection and claim map
GALACTIC	HOMESTAKE	1966	1" = 500'	Land status and claim map
MILLER	NERCO	1984	1" = 400'	Dump map
AMAX	AMAX	1989	8600	Bodie Bluff Plan map of ore blocks
AMAX	AMAX	1989	8700	Bodie Bluff Plan map of ore blocks
AMAX	AMAX	1989	8800	Bodie Bluff Plan map of ore blocks
AMAX	AMAX	1989	8900	Bodie Bluff Plan map of ore blocks
AMAX	AMAX	1989	8400	Standard Hill Plan map of ore blocks
AMAX	AMAX	1989	8500	Standard Hill Plan map of ore blocks
GALACTIC	GALACTIC/SEARCHLIGHT	1991	8900	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9000	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9100	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9200	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9300	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9400	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9500	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9600	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9700	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9800	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9900	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10000	Cross Section @ 120 degrees

APPENDIX 14: CONFIDENTIAL DATA PROVIDED BY AMAX

See Spreadsheet file APPENDIX14.xls

APPENDIX 14.. CONFIDENTIAL DATA PROVIDED BY AMAX

COMPANY	ORIGINAL SOURCE	DATE	SCALE FOOTAGE	DESCRIPTION
AMAX	AMAX	1989	8400	Standard Hill Plan map of ore blocks
AMAX	AMAX	1989	8500	Standard Hill Plan map of ore blocks
AMAX	AMAX	1989	8600	Bodie Bluff Plan map of ore blocks
AMAX	AMAX	1989	8700	Bodie Bluff Plan map of ore blocks
AMAX	AMAX	1989	8800	Bodie Bluff Plan map of ore blocks
AMAX	AMAX	1989	8900	Bodie Bluff Plan map of ore blocks
AMAX	GALACTIC/SEARCHLIGHT	1991	8900	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	9000	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	9000	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	9100	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	9100	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	9200	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	9200	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	9300	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	9300	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	9400	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	9400	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	9500	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	9500	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	9600	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	9600	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	9700	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	9700	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	9800	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	9800	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	9900	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	9900	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	10000	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	10000	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	10100	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	10100	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	10200	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	10200	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	10300	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	10300	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	10400	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	10400	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	10500	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	10500	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	10600	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	10600	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	10700	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	10700	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	10800	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	10800	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	10900	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	10900	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	11000	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	11000	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	11100	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	11100	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	11200	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	11200	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	11300	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	11300	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	11400	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	11400	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	11500	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	11500	Cross Section @ 120 degrees

APPENDIX 14.. CONFIDENTIAL DATA PROVIDED BY AMAX

COMPANY	ORIGINAL SOURCE	DATE	SCALE FOOTAGE	DESCRIPTION
AMAX	GALACTIC	1989	11600	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	11600	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	11700	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	11700	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	11800	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	11800	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	11900	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	11900	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	12000	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	12000	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	12100	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	12100	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	12200	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	12200	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	12300	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	12300	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	12400	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	12400	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	12500	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	12500	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	12600	Cross section
AMAX	GALACTIC/SEARCHLIGHT	1991	12600	Cross Section @ 120 degrees
AMAX	GALACTIC	1989	12700	Cross section
AMAX	GALACTIC	1989	12800	Cross section
AMAX	GALACTIC	1989	12900	Cross section
AMAX	GALACTIC	1989	13000	Cross section
AMAX	SIERRA MINES	1946	1" = 40'	Bodie Shaft and Mine Workings: Sections
AMAX	SIERRA MINES	1946	1" = 40'	Composit transverse section of Standard Hill
AMAX	SIERRA MINES	1945	1" = 40'	Vertical section of Harrington tunnel with assay values
AMAX	SIERRA MINES	1946	no scale	Index map to surface workings with projection of underground workings
AMAX	SIERRA MINES	1946	none	Ore reserve tables (2) by McClusky
GALACTIC	GALACTIC	1991	8400	Standard Hill Plan Map of ore blocks
GALACTIC	GALACTIC	1991	8500	Standard Hill Plan Map of ore blocks
GALACTIC	GALACTIC	no date	8700	Bodie Bluff Plan Map of ore blocks
GALACTIC	GALACTIC	1991	8800	Bodie Bluff Plan Map of ore blocks
GALACTIC	GALACTIC/SEARCHLIGHT	1991	8900	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9000	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9100	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9200	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9300	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9400	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	7/87	9400	Cross section NE e
GALACTIC	HOMESTAKE	7/87	9400	Cross section NE e
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9500	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9600	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	12/86	9600	Cross section NE 1-d
GALACTIC	HOMESTAKE	12/86	9600	Cross section NE d
GALACTIC	HOMESTAKE	11/86	9600	Cross section NE a
GALACTIC	HOMESTAKE	7/87	9600	Cross section NE e
GALACTIC	HOMESTAKE	7/87	9675	Cross section NE e
GALACTIC	HOMESTAKE	1/87	9675	Cross section NE 1-d
GALACTIC	HOMESTAKE	7/87	9675	Cross section NE e
GALACTIC	HOMESTAKE	1/87	9675	Cross section NE a
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9700	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	2/86	9750	Cross section NE a
GALACTIC	HOMESTAKE	7/87	9775	Cross section NE e
GALACTIC	HOMESTAKE	12/86	9775	Cross section NE 1-d
GALACTIC	HOMESTAKE	7/87	9775	Cross section NE e
GALACTIC	HOMESTAKE	12/86	9775	Cross section NE a
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9800	Cross Section @ 120 degrees

APPENDIX 14.. CONFIDENTIAL DATA PROVIDED BY AMAX

COMPANY	ORIGINAL SOURCE	DATE	SCALE FOOTAGE	DESCRIPTION
GALACTIC	HOMESTAKE	2/86	9800	Cross section NE a
GALACTIC	HOMESTAKE	2/86	9875	Cross section NE a
GALACTIC	GALACTIC/SEARCHLIGHT	1991	9900	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	12/86	9900	Cross section NE 1-d
GALACTIC	HOMESTAKE	7/89	9900	Cross section NE e
GALACTIC	HOMESTAKE	2/86	9900	Cross section NE a
GALACTIC	HOMESTAKE	12/86	9950	Cross section NE 1-d
GALACTIC	HOMESTAKE	12/86	9950	Cross section NE d
GALACTIC	HOMESTAKE	7/87	9950	Cross section NE e
GALACTIC	HOMESTAKE	2/86	9950	Cross section NE a
GALACTIC	HOMESTAKE	12/86	9975	Cross section NE 1-d
GALACTIC	HOMESTAKE	7/87	9975	Cross section NE e
GALACTIC	HOMESTAKE	12/86	9975	Cross section NE d
GALACTIC	HOMESTAKE	11/86	9975	Cross section NE a
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10000	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	2/86	10000	Cross section NE a
GALACTIC	HOMESTAKE	7/87	10050	Cross section NE e
GALACTIC	HOMESTAKE	12/86	10050	Cross section NE a
GALACTIC	HOMESTAKE	2/86	10075	Cross section NE a
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10100	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	7/87	10150	Cross section NE e
GALACTIC	HOMESTAKE	7/87	10150	Cross section NE e
GALACTIC	HOMESTAKE	2/86	10150	Cross section NE a
GALACTIC	HOMESTAKE	?	10175	Cross section NE a
GALACTIC	HOMESTAKE	12/86	10175	Cross section NE 1-d
GALACTIC	HOMESTAKE	12/86	10175	Cross section NE d
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10200	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	2/86	10200	Cross section NE d
GALACTIC	HOMESTAKE	2/86	10200	Cross section NE 1-d
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10300	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	12/86	10375	Cross section NE d
GALACTIC	HOMESTAKE	12/86	10375	Cross section NE 1-d
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10400	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10500	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10600	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	12/86	10600	Cross section NE 1-d
GALACTIC	HOMESTAKE	12/86	10600	Cross section NE d
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10700	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10800	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	10900	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11000	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	2/86	11000	Cross section NE a
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11100	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11200	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	2/86	11225	Cross section NE a
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11300	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	2/86	11300	Cross section NE a
GALACTIC	HOMESTAKE	2/86	11350	Cross section NE a
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11400	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	?	11425	Cross section NE ?
GALACTIC	HOMESTAKE	2/86	11425	Cross section NE a
GALACTIC	HOMESTAKE	2/86	11450	Cross section NE a
GALACTIC	HOMESTAKE	2/86	11475	Cross section NE a
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11500	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	2/86	11500	Cross section NE a
GALACTIC	HOMESTAKE	2/86	11550	Cross section NE a
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11600	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	2/86	11625	Cross section NE a
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11700	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	2/86	11750	Cross section NE a

APPENDIX 14.. CONFIDENTIAL DATA PROVIDED BY AMAX

COMPANY	ORIGINAL SOURCE	DATE	SCALE FOOTAGE	DESCRIPTION
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11800	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	7/87	11850	Cross section NE e
GALACTIC	HOMESTAKE	2/86	11850	Cross section NE a
GALACTIC	GALACTIC/SEARCHLIGHT	1991	11900	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	2/86	11900	Cross section NE a
GALACTIC	HOMESTAKE	7/87	11900	Cross section NE e
GALACTIC	HOMESTAKE	2/86	11950	Cross section NE a
GALACTIC	GALACTIC/SEARCHLIGHT	1991	12000	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	7/87	12050	Cross section NE e
GALACTIC	HOMESTAKE	2/86	12050	Cross section NE a
GALACTIC	GALACTIC/SEARCHLIGHT	1991	12100	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	12200	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	2/86	12250	Cross section NE a
GALACTIC	GALACTIC/SEARCHLIGHT	1991	12300	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	12400	Cross Section @ 120 degrees
GALACTIC	HOMESTAKE	7/87	12450	Cross section NE e
GALACTIC	HOMESTAKE	2/86	12450	Cross section NE a
GALACTIC	GALACTIC/SEARCHLIGHT	1991	12500	Cross Section @ 120 degrees
GALACTIC	GALACTIC/SEARCHLIGHT	1991	12600	Cross Section @ 120 degrees
GALACTIC	GALACTIC	1989	1" = 200'	Drill hole index plan map
GALACTIC	GALACTIC	no date	1" = 100"	Aerial mapping topographic map #100-1a
GALACTIC	GALACTIC	no date	1" = 100"	Aerial mapping topographic map #100-1b
GALACTIC	GALACTIC	no date	1" = 100"	Aerial mapping topographic map #100-2
GALACTIC	GALACTIC	no date	1" = 100"	Aerial mapping topographic map #100-3
GALACTIC	GALACTIC	no date	1" = 100"	Aerial mapping topographic map #100-5
GALACTIC	GALACTIC	no date	1" = 100"	Aerial mapping topographic map #100-6
GALACTIC	GALACTIC	no date	1" = 100"	Aerial mapping topographic map #100-7
GALACTIC	GALACTIC	no date	1" = 200	Vein projections in area of New Standard and Tioga shafts
GALACTIC	GALACTIC	1986	1" = 200'	Vein projections and topographic map
GALACTIC	GALACTIC	no date	1" = 200'	Bodie Bluff Geologic Map
GALACTIC	GALACTIC	1988	1" = 200'	Cross section index map 13000-8500
GALACTIC	GALACTIC	1989	1" = 200'	Geology and alteration map, north part of district
GALACTIC	GALACTIC	1988	1" = 200'	Proposed drill holes and visibility corridores
GALACTIC	SIERRA MINES	1946	1" = 200'	South half of Standard Hill: cross sections index
GALACTIC	SIERRA MINES	1946	1" = 200'	Composite vertical vein projections of Bodie Bluff and Standard Hill by McKlusky
GALACTIC	GALACTIC	no date	1" = 200'	Aerial mapping topographic map #200-1
GALACTIC	GALACTIC	1989	1" = 200'	Topographic and geologic map of the South part mining district (Oscar Hershery, 1931)
GALACTIC	GALACTIC	1989	1" = 200'	Topographic and geologic map of the North part mining district
GALACTIC	GALACTIC	1986	1" = 200'	Digital map projection of drill holes 55000-50500 and 59500-5500
GALACTIC	McCLUSKY	1946	1" = 200'	Composit vertical projection through Bodie Bluff and Standard Hill
GALACTIC	BODIE CONSOLIDATED	no date	1" = 2000'	Regional topographic map
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	Davis Tunnel mine map
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	Lower Whitney mine map
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	Upper Whitney mine map
GALACTIC	STANDARD CONSOLIDATED	1890's	1" = 40'	Vein projection and claim map
GALACTIC	SIERRA MINES	1946	1" = 40'	Ore grade section of Bulwer, Union Pacific, Con Pacific tunnels and Bird's Nest
GALACTIC	SIERRA MINES	1946	1" = 40'	Ore grade map of the Harrington Tunnel and Summit cross cut
GALACTIC	SIERRA MINES	1946	1" = 40'	Ore grade map of the Lower and Upper Whitney and Davis tunnels
GALACTIC	SIERRA MINES	1946	1" = 40'	Ore grade map of Bodie Tunnel
GALACTIC	SIERRA MINES	1946	1" = 40'	Ore grade map of Tioga mine
GALACTIC	SIERRA MINES	1946	1" = 40'	Ore grade map of New Standard and McClinton tunnels
GALACTIC	SIERRA MINES	1946	1" = 40'	Standard Hill sampling map: Bulwer, Union Pacific, Con Pacific tunnels + Birds next level
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	J.E. Norberg, map of Bodie mine
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	J.E. Norberg, map of Harrington tunnel
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	J.E. Norberg, map of Texas, McClinton and New Standard tunnels
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	J.E. Norberg, map of Union Pacific and Bulwer tunnels
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	J.E. Norberg, map of Con Pacific tunnel
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	J.E. Norberg, map of Hobart tunnel
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	J.E. Norberg, map of Lower Hobart tunnel
GALACTIC	TREADWELL-YUKON	1931	1" = 40'	Map of Bulwer tunnel (faded)

APPENDIX 14.. CONFIDENTIAL DATA PROVIDED BY AMAX

COMPANY	ORIGINAL SOURCE	DATE	SCALE FOOTAGE	DESCRIPTION
GALACTIC	STANDARD CONSOLIDATED	1882	1" = 40'	Property and mine workings projection map
GALACTIC	TREADWELL-YUKON	1031	1" = 40'	J.E. Norberg map of the Harrington tunnel
GALACTIC	GALACTIC	1996	1" = 400	Wall Rock Alteration
GALACTIC	HERRERRA	1985	1" = 400'	Bodie Bluff sample location map
GALACTIC	NERCO	1984	1" = 400'	Dump index map
GALACTIC	NERCO	1984	1" = 400'	Dump sample maps, sample location map with annotated Homestake surface samples
GALACTIC	HERRERA	1988	1" = 400'	Surface workings and access tunnel projections (from Chesterman base)
GALACTIC	NERCO	1984	1" = 400'	Surface rock alteration map
GALACTIC	NERCO	1984	1" = 400'	Geologic map of the Bodie property
GALACTIC	HERRERA	1986	1" = 400'	Geologic map of Bodie Bluff area
GALACTIC	HOMESTAKE	5/85	1" = 400'	Composit underground assay plan map
GALACTIC	SEARCHLIGHT	1991	1" = 50'	Longitudinal Section #1
GALACTIC	SEARCHLIGHT	1991	1" = 50'	Longitudinal Section #2
GALACTIC	SEARCHLIGHT	1991	1" = 50'	Longitudinal Section #3 (no copy of #4 was obtained)
GALACTIC	SEARCHLIGHT	1991	1" = 50'	Longitudinal Section #4
GALACTIC	SEARCHLIGHT	1991	1" = 50'	Longitudinal Section #5
GALACTIC	GALACTIC (?)	no date	1" = 50'	Section 4N + 200
GALACTIC	WRG, UNKNOWN	1964	1" = 500'	Aurora Mining District, geologic map
GALACTIC	UNKNOWN	1964	1" = 500'	Aurora Claim Map
GALACTIC	UNKNOWN	no date	1" = 500'	Aurora cross sections
GALACTIC	HOMESTAKE	1986	1" = 500'	Land status and claim map
GALACTIC	GALACTIC (?)	no date	1" = 500'	Claim map with topography
GALACTIC	HOMESTAKE	1988	1" = 500'	Index map to cross sections 7,500 to 13,000
GALACTIC	GALACTIC		1" = 500'	Digital claim map, BCM claims
GALACTIC	HOMESTAKE	1986	1" = 500'	Land status and claim map
GALACTIC	HOMESTAKE	1986	1" = 500'	Land status and claim map with topography
GALACTIC	HOMESTAKE	1986	1" = 500'	Lode claim map, NLM 1 to 42
GALACTIC	GALACTIC	no date	1" = 500'	Aerial mapping topographic mapping base map
GALACTIC	HOMESTAKE	1986	1" = 500'	Generalized location map, geologic map and cross section
GALACTIC	HOMESTAKE	1986	1" = 500'	Topographic map
GALACTIC	GALACTIC (?)	no date	1:24000	Claim map and geochemical/geological survey area
GALACTIC	TERRA SENSE	1989	1:24000	Magnetic contour map A
GALACTIC	TERRA SENSE	1989	1:24000	Magnetic contour map B
GALACTIC	TERRA SENSE	1989	1:24000	Magnetic contour map C
GALACTIC	TERRA SENSE	1989	1:24000	Flight line map
GALACTIC	TERRA SENSE	1989	1:24000	Magnetic lineament map
GALACTIC	MONO COUNTY	1890	can't read	Bodie townsite survey (faded)
GALACTIC	HOMESTAKE	no date	no scale	Vein Projections
GALACTIC	GALACTIC	1989	no scale	Vein projections Bodie Bluff-Standard Hill
GALACTIC	GALACTIC	1988	no scale	Bodie Park Map
GALACTIC	unknown	undated	no scale	Vein projections for Standard Hill
GALACTIC	GALACTIC	undated	no scale	Bodie townsite circa 1985
GALACTIC	GALACTIC	no date	no scale	Geologic/Alteration map (quartz-sericite-pyrite)
GALACTIC	GALACTIC (?)	no date	no scale	Rotary drill hole locations, 4N-200 and 1N with Bodie State Park and J. Boynton claims
GALACTIC	GALACTIC	no date	no scale	Aerial Photograph C. No control points
GALACTIC	GALACTIC	no date	no scale	Aerial Photograph D. No control points
GALACTIC	GALACTIC	no date	no scale	Aerial Photograph B. No control points
GALACTIC	GALACTIC	no date	no scale	Aerial Photograph A. No control points
GALACTIC	GALACTIC	1989	no scale	Drill hole down-hole projections and assay values (original was colored)
GALACTIC	GALACTIC	1989	no scale	Vein map of Bodie Bluff and Standard Hill
GALACTIC	GALACTIC	1988	no scale	Proposed drill holes and visibility corridors
GALACTIC	GALACTIC	no date	no scale	Proposed core holes
GALACTIC	GALACTIC	no date	no scale	Annotated proposed drilling map
GALACTIC	GALACTIC	1988	no scale	Annotated proposed drilling map with claim boundaries
GALACTIC	HOMESTAKE	no date	no scale	Enlargement of assay plan map for underground workings
GALACTIC	SIERRA MINES	1946	1" = 40'	Ore grade map projection of Bulwer, Union Pacific, Con Pacific tunnels and Bird's Nest
MILLER	HOMESTAKE	1986	1" = 1000'	Surface rock sample map (reduction) for gold
MILLER	HOMESTAKE	1986	1" = 1000'	Surface rock sample map (reduction) for arsenic
MILLER	HOMESTAKE	1986	1" = 1000'	Surface rock sample map (reduction) for antimony
MILLER	HOMESTAKE	1986	1" = 1000'	Surface rock sample map (reduction) for silver

APPENDIX 14.. CONFIDENTIAL DATA PROVIDED BY AMAX				
			SCALE	
COMPANY	ORIGINAL SOURCE	DATE	FOOTAGE	DESCRIPTION
MILLER	HOMESTAKE	1986	1" = 1000'	Surface rock sample map (reduction) for mercury
MILLER	HOMESTAKE	1986	1" = 1000'	Surface rock sample map (reduction) for thallium
MILLER	HOMESTAKE	1986	1" = 1000'	Surface rock sample map (reduction) for zinc
MILLER	HOMESTAKE	1986	1" = 1000'	Surface rock sample map (reduction) for sample numbers
MILLER	NERCO	1984	1" = 400'	Dump map

APPENDIX 15: CONFIDENTIAL REPORTS

See Spreadsheet file APPENDIX15.xls

APPENDIX 15. CONFIDENTIAL REPORTS					
AUTHOR	COMPANY REPORT	TYPE OF REPORT	DATE OF REPORT	PROVIDER OF REPORT TO BLM	COMMENTS
Staff	Galactic	APPRAISAL		GALACTIC RESOURCES INC.	Base Case Economics
Staff	Bear Creek Mining Company	APPRAISAL		GALACTIC RESOURCES INC.	Bear Creek Mining Co. Statistical Unit Evaluation Study Outline presented at Milford, Utah 1962 quarterly meeting
Staff	Galactic Services Inc.	APPRAISAL	06-03-88	GALACTIC RESOURCES INC.	Bodie Acquisition
Staff	Peat Marwick Thorne, Inc	APPRAISAL	12-01-93	GALACTIC RESOURCES INC.	Project Review Report : Bodie Project
Staff	Galactic	APPRAISAL	14-15-90	CYPRESS AMAX GOLD CORP	Bodie California Project Econmics Analysis After Tax
Blair, R G	Galactic	APPRAISAL	01-15-90	CYPRESS AMAX GOLD CORP	Memo stating why they are not conuting with the Bodie Project
Coulson, C H	Galactic	APPRAISAL	05-11-88	GALACTIC RESOURCES INC.	CASH FLOW ANALYSIS BODIE PROSPECT
Staff	Galactic	APPRAISAL	06-05-89	GALACTIC RESOURCES INC.	Economic Evalucation Bodie
Staff	Galactic	APPRAISAL	06-15-89	GALACTIC RESOURCES INC.	Economic Evalucation Bodie
Currie, J A	Galactic	APPRAISAL	08-24-91	GALACTIC RESOURCES INC.	(group of varies econmics reports collect in one report)
Enders, Steve	Galactic	APPRAISAL	04-27-88	GALACTIC RESOURCES INC.	Homestake's Bodie Project Geologic Evaluation
Gumble, Gordon	Galactic	APPRAISAL	02-28-89	GALACTIC RESOURCES INC.	Comparison of Twinned Drill Hole Bodie Project
Haddon, TJ	Amax Gold Inc	APPRAISAL	07-24-89	CYPRESS AMAX GOLD CORP	Bodie Project: AGI's Proposal to acguire a 50.1%

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AUTHOR	COMPANY REPORT	TYPE OF REPORT	DATE OF REPORT	PROVIDER OF REPORT TO BLM	COMMENTS
Harlen, Howard	Galactic	APPRAISAL	06-12-90	GALACTIC RESOURCES INC.	Bodie Gold Acquisition
Hollister, V.F.	Galactic	APPRAISAL	08-22-88	GALACTIC RESOURCES INC.	Bodie NPV Calculation
Staff	Dayton Mining Corp.	APPRAISAL	08-20-88	GALACTIC RESOURCES INC.	An Estimate of the Net Present Worth of the Bodie Mine, Mono Co. California
Staff	Galactic	APPRAISAL	05-05-88	GALACTIC RESOURCES INC.	Interim Report Summarizing Homestake's Exploration at Bodie Bluff and Standard Hill Area of the Bodie District, Mono Co., CA
McCluskey, Silby B	Berkeley CA	APPRAISAL	07-29-47	GALACTIC RESOURCES INC.	Survey of the Bodie Project Summary of Statistical Records and Estimates relating to the Gold Mining Hill, Bodie, Mono County, California
Paschall, Robert H	Galactic	APPRAISAL		GALACTIC RESOURCES INC.	Rough Draft of short Galactic History and some apperaisal of the Bodie Project
Wells, J	Galactic	APPRAISAL	06-14-89	GALACTIC RESOURCES INC.	Bodie Project Open Pit Econmics
William, Bill	Galactic	APPRAISAL	09-16-88	GALACTIC RESOURCES INC.	Bodie Project - Developement Program Design
Wolverson, Nancy J	Galactic	APPRAISAL	10-16-89	GALACTIC RESOURCES INC.	Bodie Project Mono Co., CA Geologic Review
Giroux, G P	Galactic	APPRAISAL COST	07-06-90	GALACTIC RESOURCES INC.	Cost Estmate for Reserve Study on Bodie Mine
Fox, Candace Evart	Candance Evart Fox Financail and Management	APPRAISAL TAXES	08-30-90	GALACTIC RESOURCES INC.	Information on State and County Revenues, specifically sale/use tax, income tax and personal personal property tax
Staff	Bodie Consolidated Mining Company	APPRAISAL - COST	05-19-90	GALACTIC RESOURCES INC.	notes for assumption

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AUTHOR	COMPANY REPORT	TYPE OF REPORT	DATE OF REPORT	PROVIDER OF REPORT TO BLM	COMMENTS
Damrau, Larry D	Cyprus Metals Company	COST ESTIMATION	05-25-90	CYPRESS AMAX GOLD CORP	Bodie Priject Environmental Time and Cost Estimates
Hyyppa Raymond	Hyppa Engineering, LTD	COST ESTIMATION	05-08-90	CYPRESS AMAX GOLD CORP	Cyrpus Bodie Gold Project
Staff	Galactic	DRILLING		MILLER, BOB	Bodie Project Drilling Summary Exploration Drillholes
Staff	Galactic	DRILLING	07-01-88	GALACTIC RESOURCES INC.	Map showing the Planned Drilling Area (200x200)
Whitehead, Mark	Galactic	DRILLING	02-02-90	GALACTIC RESOURCES INC.	drilling summary
Staff	Galactic	ECONOMICS	04-19-89	GUMBLE, GORDON BUREAU OF MINES	Grade Histogram
Hill and Knowlton	Galactic	ECONOMICS		GUMBLE, GORDON BUREAU OF MINES	The Impact of Bodie Consolidated Mining Company's Proposed Operation of the Economy of Mono County, California
Staff	Galactic	ENVIRONMENTAL		GALACTIC RESOURCES INC.	Table 4.9-5 Mono County, California, Housing Unit Survey
Staff	Galactic	ENVIRONMENTAL		GALACTIC RESOURCES INC.	APPENDIX III Econmic Impact of Desert Mining Industry Cutback on the 5-County Region
Staff	Candace Evert Fox Fincial and Management	ENVIRONMENTAL	01-05-90	CYPRESS AMAX GOLD CORP	Statues Report on Mono County Mineral Resources Mangement Program, Socio-Economics Analysis
	Galactic	ENVIRONMENTAL	07-29-90	GUMBLE, GORDON BUREAU OF MINES	Economic Benefits of Gold Mining Operations

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AUTHOR	COMPANY REPORT	TYPE OF REPORT	DATE OF REPORT	PROVIDER OF REPORT TO BLM	COMMENTS
Staff	Hill and Knowlton	ENVIRONMENTAL	08-27-90	GALACTIC RESOURCES INC.	Bodie Mining Economic Impact Analysis
Anderson, Shirley C.	CSU Northridge	ENVIRONMENTAL		GALACTIC RESOURCES INC.	Minera Rources of the California Desert and Their Significance to California's Econmy
Licari, Ben	Galactic	ENVIRONMENTAL	07-30-90	GALACTIC RESOURCES INC.	(collection of reports of mining impact on Calaveras County and Royal Mountain King)
Qualls, John H	GRC Economics	ENVIRONMENTAL	08-30-90	GALACTIC RESOURCES INC.	The Impact of Bodie Consolidated Mining Company's Proosed Opeation on the Economy of Mono County, California
Tilghman, B Noah	State Park Resources Ecologist	ENVIRONMENTAL	11-30-89	GALACTIC RESOURCES INC.	Economic Impact of Bodie on Local Assitance Division
Staff	Galactic	GEOLOGY		CYPRESS AMAX GOLD CORP	(cross section showing the Moyle Fault, Middle Standard Fualt, Standard Fault)
Staff	Homestake Mining Claim	GEOLOGY	06-01-84	GALACTIC RESOURCES INC.	Structures maps
Staff	Amax Gold Inc	GEOLOGY	10-01-89	CYPRESS AMAX GOLD CORP	Bodie Project Mono, Co. CA Standard Hill Alteration Schematic X-Section
Silberman, Miles L.	USGS	GEOLOGY		GALACTIC RESOURCES INC.	Field Gudie to the Bodie Mining District, Mono County, California - with Annotated Road Log
Staff	Galactic	HISTORY		GALACTIC RESOURCES INC.	collection of news articles
Staff	Galactic	HISTORY		GALACTIC RESOURCES INC.	ccollection of more news articlesollection of more news articles

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AUTHOR	COMPANY REPORT	TYPE OF REPORT	DATE OF REPORT	PROVIDER OF REPORT TO BLM	COMMENTS
Staff	CM&J	HISTORY	02-01-89	GALACTIC RESOURCES INC.	The Bodie district adds a new chapter to its history
Staff	Skilling's Mining Review	HISTORY	06-11-88	GALACTIC RESOURCES INC.	Homestake Mining/ Galactic Resource Reach Series of Argeements
Staff	Gerorge Cross News Letter LTD	HISTORY	06-28-88	GALACTIC RESOURCES INC.	a news article about Galactic
Staff	State of CA Dept. of Parks and Recreation	HISTORY	07-01-89	GALACTIC RESOURCES INC.	Historical Significance of the Bodie Mining District
Staff	Galactic	HISTORY	07-01-90	GALACTIC RESOURCES INC.	The Bodie Bulletin
Staff	Galactic	HISTORY	07-01-90	GALACTIC RESOURCES INC.	The Bodie Bulletin: Mining Co sees Coopration Between Mine, State Parks
Staff	Optimum	HISTORY	07-10-90	GALACTIC RESOURCES INC.	Bodie Project Progress Report
Staff	The Mining Record	HISTORY	08-24-88	GALACTIC RESOURCES INC.	Galactic Completes Homestake Transactions
Billeb, EW	JS Cain Co	HISTORY		GALACTIC RESOURCES INC.	By laws of the JS Cain Co.
Faulconer, Thomas P	American Institute of Aeronautics and Astronautics	HISTORY		GALACTIC RESOURCES INC.	Boom in Bodie during the Depression of the 30's
Jackson, Turrentine	Division of Beach & Parks Dept of Parks & Recreation State	HISTORY	1962 .	GALACTIC RESOURCES INC.	Historical Material on the Mining Town of Bodie, CA A Critical Bibliography
Kernot, Charles	Kitcat & Aitken & Co.	HISTORY	07-07-88	GALACTIC RESOURCES INC.	An Investment Reseach Report

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AUTHOR	COMPANY REPORT	TYPE OF REPORT	DATE OF REPORT	PROVIDER OF REPORT TO BLM	COMMENTS
Scowden, Leo A	US Dept Mineral Survey	HISTORY	10-24-1879	GALACTIC RESOURCES INC.	Minging Laws and Regulations of the 1880's
Whitehead, Mark L	Galactic	HISTORY	08-20-90	GALACTIC RESOURCES INC.	Minutes for 26 July 1990 Bodie Resource Estimation Meeting in Bridgeport CA
Staff	Galactic	LAND STATUS		GALACTIC RESOURCES INC.	Exhibit A ; brief run through of what is patent and what is claim
Staff	Amax Gold Inc.	LEASE OPTION	08-37-89	GALACTIC RESOURCES INC.	legal binding agreement
Cain, Walter B	J S Cain Co	LEASE OPTION	12-13-82	GALACTIC RESOURCES INC.	minutes, notes, ballots, and results from board meetings of JS Cain Co
Outerbridge, J Robert	Outwebridge & Associates, Inc.	LEASE OPTION	07-11-88	GALACTIC RESOURCES INC.	Land and leasehold Ownership Report Patented Lode Mining Claims
Staff	Galactic	LEASE OPTION HISTORY	04-27-89	GALACTIC RESOURCES INC.	Interview with the JS Cain Company Reno, Nevada
Staff	Galactic	LEASE OPTION HISTORY	11-07-88	GALACTIC RESOURCES INC.	discussions with W. Cain m P. Cain, and S. Mehls at Walter Cain's Home in Bridgeport, CA
Staff	Galactic	METALLURGY		GALACTIC RESOURCES INC.	Info on the CN AA shake Test
Staff	WestCoast Mineral Testing	METALLURGY	04-15-91	GALACTIC RESOURCES INC.	Review of Mineral Process Testing Bodie Project
Staff	Metallurgical Service	METALLURGY	10-17-89	CYPRESS AMAX GOLD CORP	Metallurgical Test Results on Bodie Core Sample
Gathje, John C	Hazen Research Inc	METALLURGY	10-27-89	GALACTIC RESOURCES INC.	Determination of Griding and Abrasion Indices

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AUTHOR	COMPANY REPORT	TYPE OF REPORT	DATE OF REPORT	PROVIDER OF REPORT TO BLM	COMMENTS
Hyyppa, Raymond R	Hyyppa Engineering LTD	METALLURGY	05-08-90	GALACTIC RESOURCES INC.	
Pitard, Francis	Pierre Gy and Francis Pitard Sampling Consulting	METALLURGY	06-26-89	CYPRESS AMAX GOLD CORP GALACTIC RESOURCES INC.	Study of the Heterogeneity of Gold in the Bodie Ore
Warren, Ray N	Bodie Consolidated Mining Company	METALLURGY	05-19-89	GALACTIC RESOURCES INC.	Bodie Project CN AA Shake - Test Results
MSE	Galactic	METALLURGY GEOLOGY	04-19-89	CYPRESS AMAX GOLD CORP	Distribution of Mineralization Relative to a Banned Vein
Staff	Galactic	MINERALOGY		MILLER, BOB	Distribution of Mineralization Relative to a Banded Vein
Staff	Galactic	ORE RESERVES		CYPRESS AMAX GOLD CORP	Geometric Mean versus Arithmetic Average
Staff	Galactic	ORE RESERVES		CYPRESS AMAX GOLD CORP	??Hole location and assay's results ??
Staff	Galactic	ORE RESERVES		CYPRESS AMAX GOLD CORP	Bodie Summary
Staff	Galactic	ORE RESERVES		CYPRESS AMAX GOLD CORP	Appendix A Assay Results AMAX drill holes
Staff	Galactic	ORE RESERVES		CYPRESS AMAX GOLD CORP	a missing page from a report on holes 129
Staff	Galactic	ORE RESERVES		CYPRESS AMAX GOLD CORP	(Land Map) showing exploration target
Staff	Galactic	ORE RESERVES		GALACTIC RESOURCES INC.	Table No. 2 Summary: Waste to "Ore" ratio
Staff	Galactic	ORE RESERVES		GALACTIC RESOURCES INC.	Underground information, assays comments, and Underground calculations

APPENDIX 15. CONFIDENTIAL REPORTS					
AUTHOR	COMPANY REPORT	TYPE OF REPORT	DATE OF REPORT	PROVIDER OF REPORT TO BLM	COMMENTS
Staff	Galactic	ORE RESERVES		GALACTIC RESOURCES INC.	3-Demisional sketch of the Bodie Pit
Staff	Galactic	ORE RESERVES		GALACTIC RESOURCES INC.	personal notes on sample locations and Geological discription
Staff	Galactic	ORE RESERVES		MILLER, BOB	BCMC Resources Block Construction Methods
Staff	Searchlight Consultants Inc	ORE RESERVES	1990	GALACTIC RESOURCES INC.	maps: showing sample location
Staff		ORE RESERVES	01-18-89	GALACTIC RESOURCES INC.	Bodie Project Warehouse Core Inventory
Staff	Beak Consultants Incorporated	ORE RESERVES	02-28-92	GALACTIC RESOURCES INC.	(Map) Initail Trenching Location
Staff	Homestake Mining Co.	ORE RESERVES	03-01-88	GALACTIC RESOURCES INC.	Summary Report
Staff	Galactic	ORE RESERVES	05-01-92	MILLER, BOB	Summary of the Geology of the Northern Part of the Bodie Mining District, Mono County, California
Staff	Galactic	ORE RESERVES	08-23-90	GALACTIC RESOURCES INC.	Notes on meeting held at tha offices of Searchlight Consultants
Staff	Galactic	ORE RESERVES	11-01-89	MILLER, BOB	Base Case Economics
Albanese, Thomas	Nerco Mineral Company	ORE RESERVES	06-22-90	GALACTIC RESOURCES INC.	reserve analysis
Barker, R	Amax Exploration	ORE RESERVES	06-30-89	CYPRESS AMAX GOLD CORP	Review of Bodie Property, Mono Co, CA
Blair, R G	Galactic	ORE RESERVES	05-25-88	CYPRESS AMAX GOLD CORP	Field and Data Review of Hcmestake's Submittal om the Bodie Gold District, Mono Co., CA

APPENDIX 15. CONFIDENTIAL REPORTS					
AUTHOR	COMPANY REPORT	TYPE OF REPORT	DATE OF REPORT	PROVIDER OF REPORT TO BLM	COMMENTS
Carson, HB	Amax Exploration	ORE RESERVES	05-16-89	CYPRESS AMAX GOLD CORP	Preliminary Summary Report on Bodie prepared by CTMC
Coolbaugh, Mark	Summitville Consolidated Mining Company Inc.	ORE RESERVES	06-26-90	GALACTIC RESOURCES INC.	Review of Bodie Ore Reserves
Ender, Steve		ORE RESERVES	05-25-89	CYPRESS AMAX GOLD CORP	Bodie Project Final Report on the Resources Potential
Enders, M. Stephen	Bodie Consolidated Mining Co	ORE RESERVES	05-24-89	CYPRESS AMAX GOLD CORP	Bodie Project Mono Co, CA April 1989 Estimate of the Resource Potential
Enders, Steve	Galactic Service Inc	ORE RESERVES	04-27-88	GALACT C RESOURCES INC.	Homestake's Bodie Project Geologic Evaluation
Enders, Steve	Galactic	ORE RESERVES	05-06-88	GALACT C RESOURCES INC.	Homestake's Bodie Project McCluskey Report
Enders, Steve	Galactic	ORE RESERVES	05-25-89	CYPRESS AMAX GOLD CORP	Bodei Project Final Report on the Resources Potential
Gumble, G.	Bonder Clegg Testing Services	ORE RESERVES	10-18-93	GALACTIC RESOURCES INC.	Geochemical Lab Report (done for the USBM)
Gumble, Gordon	Galactic	ORE RESERVES	02-28-89	GALACTIC RESOURCES INC.	Comparison of Twinned Drill Holes
Gumble, Gordon	Bodie Consulated Mining Co.	ORE RESERVES	05-29-92	GALACTIC RESOURCES INC.	Bodie Resource Estimate
Gumble, Gordon	Bodie Consulated Mining Co.	ORE RESERVES	07-14-90	GALACTIC RESOURCES INC.	Bodie Project, Mono Co., CA Comparison of Bodie Resource Estimates
Gumble, Gordon	Galactic	ORE RESERVES	07-30-90	GALACTIC RESOURCES INC.	Rules for Hand Resource Blocks

APPENDIX 15. CONFIDENTIAL REPORTS					
AUTHOR	COMPANY REPORT	TYPE OF REPORT	DATE OF REPORT	PROVIDER OF REPORT TO BLM	COMMENTS
Gumble, Gordon	Galactic	ORE RESERVES	10-24-88	CYPRESS AMAX GOLD CORP	Sample Collection and Mine Planning - Bodie Project
Gumble, Gordon E	Galactic	ORE RESERVES	02-01-92	GALACTIC RESOURCES INC.	Bodie Resource Estimation
Hollister, VF	Victor F. Hollister Geoloical Consultants, LTD	ORE RESERVES	08-09-89	GALACTIC RESOURCES INC.	Bodie Mineral Inventory, Including Hole 182
Hollister, VF	Victor F. Hollister Geoloical Consultants, LTD	ORE RESERVES	08-13-90	GALACTIC RESOURCES INC.	Bodie Ore Reserve Estimates
Hollister, VF	Victor F. Hollister Geoloical Consultants, LTD	ORE RESERVES	11-28-89	GALACTIC RESOURCES INC.	11/20/89 Memo on Bodie
Jennings, T L	US Reconnaissance Prospect Development Group	ORE RESERVES	06-01-87	CYPRESS AMAX GOLD CORP	Bodie Project Mono County, California Status Report
Kuhl, Tim	Galactic	ORE RESERVES	03-02-84	GALACTIC RESOURCES INC.	NERCO Mineral Co. and brief summary of Bodie mining district
Macfarlane, H S	Searchlight Consultants Inc	ORE RESERVES	08-07-90	GALACTIC RESOURCES INC.	Comments, Questions and Answewers concerning the drill holes
Murray, Bill	Optimum Project Service LTD	ORE RESERVES	08-15-90	GALACTIC RESOURCES INC.	Notes on Meeting in Vancouver July 16-18, 1990
Parkes, David	Searchlight Consultants Inc	ORE RESERVES	07-09-90	GALACTIC RESOURCES INC.	memorandom of June 29,1990 Bodie Project
Parkes, David	Parwest Mining International LTD	ORE RESERVES	09-10-90	GALACTIC RESOURCES INC.	two Block Model and Profit Matrix

APPENDIX 15. CONFIDENTIAL REPORTS					
AUTHOR	COMPANY REPORT	TYPE OF REPORT	DATE OF REPORT	PROVIDER OF REPORT TO BLM	COMMENTS
Parkes, David	Parwest Mining International LTD	ORE RESERVES	09-14-90	GALACTIC RESOURCES INC.	a Block Model and Profit Matrix
Parkes, David	Optimum Project Services LTD	ORE RESERVES	11-06-90	GALACTIC RESOURCES INC.	Cumilative Tonnage and Grade Estimates
Warren, R.	Galactic	ORE RESERVES	08-08-88	GALACTIC RESOURCES INC.	Bodie Project Final Histogram Results
Whitehead, Mark	Galactic	ORE RESERVES	04-09-90	GALACTIC RESOURCES INC.	Menzekis Open File Report Qualls
Enders, Steve	Galactic	ORE RESERVES DRILLING	04-19-89	CYPRESS AMAX GOLD CORP GALACTIC RESOURCES INC.	Bodie Project Database Statistics Fpr Holes #1-#128
Staff	Homestake Mining Co.	ORE RESERVES DRILLING		GALACTIC RESOURCES INC.	Outcrop Geology map of Bodie
Staff	Galactic	ORE RESERVES DRILLING	04-06-89	GALACTIC RESOURCES INC.	Explanation of Geologic Drill Form
Staff	Galactic	ORE RESERVES DRILLING	06-17-88	GALACTIC RESOURCES INC.	Exploration and Development Coded Geologic Drilling Guide
Staff	Galactic	ORE RESERVES DRILLING	06-17-88	GALACTIC RESOURCES INC.	Explanation of Geologic Drill Form
Davis, Ed	Galactic	PLACER	09-01-90	GALACTIC RESOURCES INC.	Placer Trenches
Staff	Galactic	UNDERGROUND		GALACTIC RESOURCES INC.	Map Showing the Sample Location Numbers
Haley, Fred S	Galactic	UNDERGROUND	12-30-90	GALACTIC RESOURCES INC.	Underground Bulk Sampling at Bodie

APPENDIX 15. CONFIDENTIAL REPORTS

AUTHOR	COMPANY REPORT	TYPE OF REPORT	DATE OF REPORT	PROVIDER OF REPORT TO BLM	COMMENTS
Warren, Ray	Galactic	UNDERGROUND	02-02-89	GALACTIC RESOURCES INC.	Bodie Underground Vein Fault Study
Warren, Ray	Galactic	UNDERGROUND	02-08-89	GALACTIC RESOURCES INC.	Average Number of Veins/ Series in Standard Hill and Bodie Bluff

APPENDIX 16A: VERIFICATION OF HERRERA AND U.S.G.S. DATA

Petrographic Descriptions of Core Samples

CORE BB2 (Phelps Dodge Corporation)
Herrera's Thesis

BB2-35-39 feet: BLM Sample Number 4000
U.S.G.S. Sample B2-25 = 2.3 oz/ton Au
Leached dacite, opaline fragments, limonite, kaolinite, phenocrysts weathered away to form voids.

BB2-46 feet: BLM 4001
U.S.G.S. Sample B2-45 = 0.45 oz/ton Au
U.S.G.S. Sample B2-46 = 0.15 oz/ton Au
At 45 feet "flat banded qtz-adu vein with green illite"
opalesceous quartz-adularia vein with limonite plus magnesium oxides, some vugs after calcite.

BB2-71 feet: BLM Sample Number 4002
No description in Hererra
U.S.G.S. Sample B2-71 = 1.1 oz/ton Au
White quartz vein plus altered dacite vein has some vugs plus magnesium oxide plus limonite quartz is opalesceous with some banding and iron oxide.

BB2-95-112 feet: BLM 4003
No U.S.G.S sample
At 95-97 feet "large banded vein TW=3" @60 to cla"
at 104-117 feet "Breccia, related to qtz-adu veining @ 104 str MnO2 present"
quartz vein banded plus limonite and hematite. Some manganese oxide bands.

BB2-125-133Y: BLM Sample Number 4004
U.S.G.S. Sample B2-128 = 0.1 oz/ton Au
U.S.G.S. Sample B2-130 = 0.05 oz/ton Au
U.S.G.S. Sample B2-132 = 0.02 oz/ton Au
At 117-124 feet "Pyrite + illite are added to bxa matrix @ 127' vein w/Tw - I" @ 50 to c/a"
vuggy quartz vein in purple dacite with yellow white altered phenocrysts limonite coatings on some vugs possible drusy zeolites. Vein is 3/8 inch wide.

BB2-136-140 feet: BLM Sample Number 4005
U.S.G.S. Sample B2-139 = 0.1 oz/ton Au
U.S.G.S. Sample B2-140 = 0.02 oz/ton Au
U.S.G.S. Sample B2-141 = 0.05 oz/ton Au
At 133-136 feet "Banded qtz-adu vein. Tw=2' @ 50 to cla"

at 140-170 feet "Hydrothermal bxa with qtz veinlets, dissem. pyrite + illite, vugs common dense purple dacite host"banded quartz- adularia vein 1 inch wide plus silicified, leached fine-grained volcanic plus limonitic "soil"-like vein material.

BB2-140-162 feet: BLM Sample Number 4006
U.S.G.S. Sample B2-140 = 0.2 oz/ton Au
U.S.G.S. Sample B2-141 = 0.05 oz/ton Au
U.S.G.S. Sample B2-150 = 0.02 oz/ton Au
U.S.G.S. Sample B2-157 = 0.05 oz/ton Au
U.S.G.S. Sample B2-160 = 0.02 oz/ton Au
U.S.G.S. Sample B2-162 = 0.03 oz/ton Au
At 140-170 feet (see above) banded quartz vein with vuggy center (single band) in purple dacite, other quartz-adularia vein lenses, kaolinite altered pheoncrysts, some limonite.

BB1-28 feet: BLM Sample Number 4007
U.S.G.S. #856-D70A=0.3 oz/ton Au
Banded quartz-adularia vein, 3/4 inch wide, vuggy, manganese oxide on fractures in leached brown orange dacite with iron stains.

BB1-169 feet: BLM Sample Number 4008
No U.S.G.S. sample
oxidized volcanic breccia, silicified with drusy quartz veinlett, 1/16-3/8 inches wide limonitic-kaolinitic matrix with white-tan breccia fragments.

BB1-231feet: BLM Sample Number 4009
No U.S.G.S. sample
Sericitic-silicified-kaolinzed-s/t limonite dacite with 3/16 inches banded quartz vein with medial vug. The vug has drusy quartz plus limonite plus zeolite?

BB1-289.5 feet: BLM Sample Number 4010
No U.S.G.S. sample
Oxidized, sericitized, dactie breccia with banded quartz-adularia veins with central limonitic-drussy quartz vugs. Yellow limonite coatings of quartz (iron sulfate?).

BB3-143 feet: BLM Sample Number 4011
No U.S.G.S. sample
Multiple-banded white quartz-adularia vein with vugs containing zeolite-clay plus limonite psudomorphs of calcite.

BB3-539 feet: BLM Sample Number 4012
No U.S.G.S. sample

illitic-altered dacite breccia, white kaolinized phenocrysts with irregular quartz-zeolite veinletts, slt limonite.

BB3-92-93 feet: BLM Sample Number 4013
No U.S.G.S. sample
Multi-banded white quartz-adularia vein 1/2-3/4 inches wide, limonite in vugs.

BB3-217 feet: BLM Sample Number 4014
No U.S.G.S sample
multi-banded, vuggy quartz-adularia vein with limonite in vugs, pseudomorphs of calcite.

BB3-273.5 feet: BLM Sample Number 4015
No U.S.G.S sample
purple dacite breccia with white kaolinite-illite phenocrysts. Breccia matrix replaced with quartz veinletts, vuggy with drusy quartz with limonite coatings.

BB4-108 feet: BLM Sample Number 4016
No U.S.G.S sample
vuggy quartz-adularia vein 4 inches wide with limonite plus sulfides (?), zeloite, hematite. Vugs ap to 1 1/2 inches long, 3/8 inches wide with drusy quartz coated by limonie, kaolinite, hematite. Highly irregular banding.

BB4-154 feet: BLM Sample Number 4017
No U.S.G.S sample
leached volcanic breccia with quartz veinletts and matrix replacement. White quartz-adularia vein, not banded, vuggy with psedomorphs of calcite, limonite, kaolinite. Yellow-iron sulfate coatings.

BB4-267 feet: BLM Sample Number 4018
No U.S.G.S sample
fine grained massive quartz vein. Minor banding, 4 inches wide.

BB4-218 feet: BLM Sample Number 4019
No U.S.G.S sample
purple dacite breccia, leached limonitic, iron-sulfate plus kaolinite, no quartz veins.

BB4-503 feet: BLM Sample Number 4020
No U.S.G.S sample
purple dacite with illitic white phenocrysts. Banded quartz-adularia veinletts 3/16-3/8 inches wide with medial vug. Vugs coated with limonite on drusy quartz.

BB4-289 feet: BLM Sample Number 4021
No U.S.G.S sample
Weakly banded quartz-adularia vein, white, limonite on factures 3/4 inches wide.

BB4-328 feet: BLM Sample Number 4022
No U.S.G.S sample
massive-banded quartz-adularia vein 4 inches wide, bands 1/16 to 3/8 inches apArt. Bands have yellow-orange limonite in micro-vugs.

BB4-362 feet: BLM Sample Number 4023
No U.S.G.S sample
purple dacite with 1/8 inches mono-banded quartz vein with medial vug. Vug has minor limonite coatings on quartz.

BB4-383 feet: BLM Sample Number 4024
No U.S.G.S sample
weakly banded quartz vein, manganese oxides plus limonite in vuggy bands.

BB4-407.5-408 feet: BLM Sample Number 4025
No U.S.G.S sample
grey dactie with kaolinized phenocrysts, 1/8 inches quartz vein with medial vugs, illitic altered.

APPENDIX 16B: VERIFICATION OF HERRERA AND U.S.G.S. ASSAY RESULTS

See Spreadsheet file APPENDIX16.xls

APPENDIX 16. VERIFICATION OF HERRERA AND U.S.G.S. DATA							
				BLM	BLM		
		Au oz/ton	Comments	Au	Au		
	TYPE	Comparative		ppm	oz/ton		
SAMPLE NUMBER	CONTAINER	AA-Assay		FIRE		Difference	Percent
		Result		ASSAY			Difference
BT-346	vial	0.06	Bodie Tunnel	0.9	0.0261	0.0339	-37.5%
BT-444	vial	0.10	Bodie Tunnel	0.9	0.0261	0.0739	-16.1%
BT-563	vial	0.10	Bodie Tunnel	0.2	0.0058	0.0942	4.2%
BT-630A	vial	0.80	Bodie Tunnel	0.3	0.0087	0.7913	78.9%
BT-761	vial	0.10	Bodie Tunnel	2.6	0.0754	0.0246	-65.4%
BT-815	vial	0.10	Bodie Tunnel	1.9	0.0551	0.0449	-45.1%
BT-849A	vial	0.10	Bodie Tunnel	1.5	0.0435	0.0565	-33.5%
BT-972A	vial	0.05	Bodie Tunnel	2.6	0.0754	-0.0254	-145.8%
BT-1076	vial	0.10	Bodie Tunnel	0.04	0.00116	0.09884	8.8%
BT-1579A	vial	0.60	Bodie Tunnel	0.04	0.00116	0.59884	59.8%
BB3-VEIN	paper vial	6.20		9.5	0.2755	5.9245	615.6%
EBBAX-21B	envelope	3.90		14	0.406	3.494	379.6%
ROSECLIP 008	envelope	0.20	Roseclip Pit	24	0.696	-0.496	-328.0%
ROSECLIP 010	envelope	0.30	Roseclip Pit	6.5	0.1885	0.1115	-32.8%
ROSECLIP 031A	envelope	14.00	Roseclip Pit	31.1	0.9019	13.0981	1393.6%
ROSECLIP 031B	envelope	5.30	Roseclip Pit	23	0.667	4.633	517.4%
ROSECLIP 065A	envelope	1.60	Roseclip Pit	6.8	0.1972	1.4028	147.7%
ROSECLIP 075A	envelope	0.70	Roseclip Pit	1.1	0.0319	0.6681	65.4%
855-D7A	cloth bag	1.10		9.2	0.2668	0.8332	85.7%
855-011D	cloth bag	1.10		1.8	0.0522	1.0478	105.3%
855-P42G	cloth bag	1.20		1.2	0.0348	1.1652	117.1%
855-D49	cloth bag	1.50		37.4	1.0846	0.4154	77.7%
856-069B	cloth bag	12.00		127.6	3.7004	8.2996	1169.2%
856-P66A	cloth bag	1.80		23.4	0.6786	1.1214	142.3%
856-068A	cloth bag	3.70		85.6	2.4824	1.2176	302.9%
856-P75A	cloth bag	7.20		4.2	0.1218	7.0782	718.3%
856-P81A	cloth bag	0.80		21.6	0.6264	0.1736	1.7%
856-D85E	cloth bag	0.10		2.5	0.0725	0.0275	-62.5%
BB-1B	cloth bag	0.15	Bodie Tunnel	0.6	0.0174	0.1326	3.4%
BB-6A	cloth bag	1.70	Bodie Tunnel	3.1	0.0899	1.6101	164.7%
BB-6Q	cloth bag	0.50	Bodie Tunnel	34	0.986	-0.486	-147.2%
BB-3O	cloth bag	0.25	Bodie Tunnel	2.7	0.0783	0.1717	-6.3%
McCLINTON	cloth bag	8.00	McClinton Shaft (?)	1.9	0.0551	7.9449	799.3%
UH-1A	cloth bag	20.00	Upper Hobart Tunnel	5.5	0.1595	19.8405	1999.2%
UH-5	cloth bag	0.40	Upper Hobart Tunnel	8.1	0.2349	0.1651	-18.7%

APPENDIX 16. VERIFICATION OF HERRERA AND U.S.G.S. DATA							
				BLM	BLM		
		Au oz/ton	Comments	Au	Au		
	TYPE	Comparative		ppm	oz/ton		
SAMPLE NUMBER	CONTAINER	AA-Assay		FIRE		Difference	Percent
		Result		ASSAY			Difference
UH-6	cloth bag	0.35	Upper Hobart Tunnel	31	0.899	-0.549	-221.9%
UH-9	cloth bag	0.35	Upper Hobart Tunnel	0.3	0.0087	0.3413	32.5%
4000: BB2-35/39X	cloth bag		BB2-35/39X	1.2	0.0348		
4001: BB2-46	cloth bag		BB2-46	0.3	0.0087		
4002: BB2-71	cloth bag		BB2-71	36.7	1.0643		
4003: BB2-95/112	cloth bag		BB2-95/112	17.1	0.4959		
4004: BB2-127/133Y	cloth bag		BB2-127/133Y	0.05	0.00145		
4005: BB2-136/140	cloth bag		BB2-136/140	7.9	0.2291		
4006: BB2-140/162Z	cloth bag		BB2-140/162Z	3.2	0.0928		
4007: BB1-856/1270A	cloth bag		BB1-856/1270A	0.06	0.00174		
4008: BB1-169	cloth bag		BB1-169	4.4	0.1276		
4009: BB1-231	cloth bag		BB1-231	24.1	0.6989		
4010: BB1-289.5	cloth bag		BB1-289.5	1.7	0.0493		
4011: BB3-143	cloth bag		BB3-143	23.7	0.6873		
4012: BB3-539	cloth bag		BB3-539	3.3	0.0957		
4013: BB3-92/93	cloth bag		BB3-92/93	38.9	1.1281		
4014: BB3-217	cloth bag		BB3-217	15.8	0.4582		
4015: BB3-273.5	cloth bag		BB3-273.5	2	0.058		
4016: BB4-108	cloth bag		BB4-108	0.6	0.0174		
4017: BB4-154	cloth bag		BB4-154	0.3	0.0087		
4018: BB4-267	cloth bag		BB4-267	9.9	0.2871		
4019: BB4-218	cloth bag		BB4-218	0.08	0.00232		
4020: BB4-503	cloth bag		BB4-503	2.9	0.0841		
4021: BB4-289	cloth bag		BB4-289	163.3	4.7357		
4022: BB4-328	cloth bag		BB4-328	5.7	0.1653		
4023: BB4-362	cloth bag		BB4-362	0.6	0.0174		
4024: BB4-383	cloth bag		BB4-383	2.3	0.0667		
4025: BB4-407.5/408	cloth bag		BB4-407.5/408	2.3	0.0667		

APPENDIX 17: DISCOUNTED CASH FLOW

See Spreadsheet file APPENDIX17.xls

IN POCKET

APPENDIX 18: PLACER TRENCH LOGS

Trench 1 (Sample P1)

~15' deep in edge of "meadow" first 10' black wet clayey material below this light tan clay. Below this is boulderly-gravelly-sandy up to rare 1' boulders.

>trench is 25' east of old Galactic trench, per Doug Dodge, who saw it open. Also, there is a shallow depression (~~12"-14").

Trench 2 (Sample P2)

At 10' have abundant water and cobbles.

Trench 3 (Sample P3)

20' from bedrock exposure. 20' south of berm from older trench.

10' of dry soil to saturated zone with some sand at 12-13'. Sample p3 taken from this zone.

Trench 4 (Sample P4)

6' black-brown clay to sandy gravel boulders at 8-10'. Abundant brown clay at 8'

10-13' sandy gray gravel

0--
gray soil 2'
2--
black clay 2'
4--
gray sand 2-4'
6--
boulder/clay bed 2'
8--
gray sand and gravel less than 4'

Sample P4 taken at 8'.

Trench 5 (Sample P5)

Excavated perpendicular to old trench in drainage ditch 4' deep

0--
gray soil--1' silty
1--
black clay--1'
2--
clay sand--1'
3--
gravel-sand-clay hard--1'
4--
brown clay--2'
6--
rocky-clay brown--1'
8--
light gray clay
yellow-white
13--
silty yellow clay

Sample P5 taken at 3'-4'.

Trench 6 (Sample P6)

Center-west edge of tailings adjacent to "Indian Hill" at junction of two roads

0--
brown-gray soil and rock with boulders up to 3'--3'
3--
gray sand and clay with boulders--3'
6--
gray-brown clay soil sandy--2'
8--
sand and clay, gray decomposed volcanics less than 4'

Sample P6 taken at 8'.

Trench 7 (Sample P7)

In tailings due east of Trench 6

0--
tailings--4'
4--
black silty clay--1'
5--
tan silty clay with red streaks of red clay with some sand--3'
8--
white yellow sandy clay greater than 8'
15--

Sample P7 collected from tailings only, 0-4'.

Trench 8-9 (Samples P8 and P9)

Location is due east of Trench 7

0--
tailings--12'
12--
black-gray silty clay at contact--2'
14--

Sample P8 was taken 8'-12'. Sample 8 is 80% tailings, 20% black clay.
Sample P9 was taken 0'-12'. Trench 9 is the same as Trench 8, 100% tailings. Backhoe scoop base to surface.

Trench 10-11 (Samples P10 and P11)

Excavated on road that runs perpendicular to power line road at south edge of ground sluicing area

0--
soil and rocky gravel: remnant of ground sluicing
2--
brown sandy clay
4--
brown sandy gravel
6--
brown clay with sand
12--
yellow-white clays
14--

Sample P10 was taken 0'-2'.
Sample P11 was taken 4'-6'.

Trench 12 (Sample P12)

In ditch on south side of tailings

0–
reddish brown soil
3.5–
gray clay silt well to moderately indurated
5–
decomposed volcanic
8–
bottom of hole

Sample P12 taken at interface of soil and gray silt.

Trench 13-14 (Samples P13 and P14)

In center of tailings due east of Indian Hill~~300', same location of sample 07/12/95. west center of tails and north of Trench 12

0–
reddish-brown sandy silty soil, fine grain, slightly moist (dry to moist). To 4' increase in sandy content and moisture.
4–
tailings with some clay lenses~~3" thick
10–
dark gray sand, saturated
11–
black silty clay with some sand with plant matter
13–
total depth

Sample P13 taken at interface of tailings/gray sand.
Sample P14 taken at composite sample collected from 4' depth to surface.

Trench 15-16 (Samples P15 and P16)

Northwest edge of tailings in ditch

0--
reddish brown silty sand--tails
4--
black clay~~6"
5--
sand, gravel, rock, and clay--red-brown, colluvial, subangular rocks, fragments (½"-4" dia.)
6--

Sample P15 taken at gravel sample at 5'.
Sample P16 taken at tailings at 0'-4'.

Trench 17-18 (Samples P17 and P18)

In ditch on north-center edge of tailings where two pitches are truncated by a north-south berm

0--
tailings
5--
clay, gravel, sand, rock
6--
gray sand
7--
decomposed volcanic

Sample P17 taken from 0'-5'.
Sample P18 taken from 5'-6'.

Trench 19-20 (Samples P19 and P20)

Along south margin of tailings next to irrigation ditch.

0--
surface is yellow-brown sand tailings
4.5--
yellow clay
5.5--
greenish grey clay layer
6--
brown (soil horizon?)
8-8.5--
lithified gravel
12--
decomposed andesite, volcanics, base of trench

Sample P19 taken from 4.5'-5.5'.
Sample P20 taken from 8'-8.5'.

Trench 21-22-23 (Samples P21, P22 and P23)

Midpoint of tailings between Trenches 17 and 19.

0--
tailings, 6" top soil to the base of the tailings
0.5--
black clay
1.5--
gravel layer-water bearing, discontinuous lenses in the clay
8.5--
black clay
12--
black gravel with large 1' thick boulders
15'
brown gravel

Sample P21 taken at the base of tailings.
Sample P22 taken 1.5'-8'.
Sample P23 taken 12'-15'.

Trench 24-25-26 (Samples P24, P25 and P26)

At the northeast edge of tailings north of west edge of tailings dam, south of berm

0–
tailings
6–
dark brown clay soil horizon
8–
black sandy clay
12.5--
gravel
13–
decomposed andesite volcanics

Sample P24 is a composite of 0'-6'.
Sample P25 taken at 6'-8'.
Sample P26 taken at 12.5'-13'.

Trench 27-28 (Samples P27 and P28)

east of center edge of tailings

0–
tailings
5.5–
dark gray brown clay
8–
black sandy clay
10.5--
coarse gravel layer
13–
decomposed volcanics, purple andesite

Sample P27 not run for amalgamation, composite of tailings taken at 0'-5.5'.
Sample P28 taken at 10.5-13.

Trench 29-30 (Samples P29 and P30)

Southeast corner of tailings~50 yards south of edge of tailings pond area heavily vegetated with sage.

0--
tailings, yellow-brown sand
4--
black clay-soil horizon, very organic
8--
gravel-huge boulders, size to 4'
9.5--
brown gravelly sand
11--
brown decomposed volcanics
15--
sharp contact, purple decomposed volcanics

Sample P29 taken at 0'-4', composite sample.
Sample P30 taken at 9.5.

Trench 31 (Sample P31)

In ditch at northwest edge of tailings, ditch is 3' deep

0--
soil and rock
2--
hard clay and rock with indurated gravel
3--
excavator can't go deeper

Trench 32 (Sample P32)

At northeast side of Indian Hill, 20 feet from surface bedrock exposure

0--
tailings
2--
gray silt
5--
purple dacite

Sample P32 taken at 0'-2' not run for amalgamation.

Trench 33-34-35 (Samples P33, P34 and P35)

Half way between Trench 31 and 32.

0–
tailings
4--
rock and gravel
8--
broken clay-silt
9–
boulders, gravel, and sand
10--
decomposed volcanic

Sample P33 taken 0'-4'.
Sample P34 taken 4'-8'.
Sample P35 taken 9'-10'.

Trench 36 (Sample P36)

At road intersection northwest of Indian Hill, taken in ditch 2' deep.

0–
tan soil
2–
brownish tan rock and soil
3--
reddish gravel and rock
6–
decomposed volcanics

Sample P36 taken at 3'-6'.

Trench 37 (Sample P37)

in west trench of two big trenches east of Vindicator adit, dug trench 6' deep in berm of soil, rock, and gravel, excavated sample by shovel after back hoe had cleared trench.

Trench 38 (Sample P38)

South of Red Cloud Mine on north facing slope at old exploration trench

reddish-brown soil, sand and rock fragments up to two feet in diameter

0--
soil
2--
reddish rock, soil, and sand
5--
gray clay and sand
9--
decomposed volcanic

Sample P38 taken at 5'-9'.

Trench 39 (Sample P39)

in stream bed south of Indian Hill near road junction between road that goes on south side of stream and cross-over road to north side of stream

0--
black clay
3--
tan-black gravel, rock, and clay
4--
tan-brown sand
6--
decomposed volcanics

Sample P39 taken 0'-3'.

Trench 40 (Sample P40)

Hand dug sample from Bodie Creek at road to Osceola Millsite, 1.5 foot deep pits.

Trench 41-42 (Samples P41 and P42)

At road junction on west side of Indian Hill, near power line, 50 feet northeast of water well.

0–
soil and ground sluicing debris
6–
black-brown sandy clay with some gravel
8--
brown rock, sand, and gravel
10--
white-yellow silty clay
12–
decomposed volcanics

Sample P41 taken 0'-6'.
Sample P42 taken 8'-10'.

Bulk Sample P43

90 feet west of Trench 1, about half way between Trench 1 and 37

0–
soil
2--
black clay
3--
tan sand
5--
wet brown clay
6–
gravel
7--
clay-sand down to 11'

Moved to 50 feet from Trench 1.

Sample P43 taken from 6' to 7'

Trench 44 (Sample P44)

0--
soil
1--
black clay
1.5--
gray clay-sand
3--
black-brown clay
5--
dark gray-brown clay silt
11--
yellow-brown clay silt
13--
decomposed volcanic

Sample P44 taken from 5' to 11'

Trench 45 (Sample P45)

15' east of Trench 1

0--
soil
0.5--
black clay
1--
wet gray sand
4--
brown clay
7--
dark brown sandy clay
12--
decomposed volcanic boulders

Saw gravel layer in south side of pit. Moved backhoe 15 feet south to get gravel. Water pouring into pit from gravel at 7'-9

Sample P45 taken from 7' to 9".

APPENDIX 19A: PLACER STRATIGRAPHY AND AMALGAMATION RESULTS

See Spreadsheet file APPENDIX19A.xls

APPENDIX 19A. PLACER STRATIGRAPHY AND AMALGAMATION RESULTS								
TRENCH 5							GROSS	ADJUSTED
					SAMPLE	OVER-	AU	AU
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE
A	GREY SOIL	0	1	1				
B	BLACK CLAY	1	2	1				
	CLAY SAND	2	3	1				
C	GRAVEL-SAND-CLAY	3	4	1	5	3	0.05	0.04
D	BROWN CLAY	4	6	2				
D+E	ROCKY BROWN CLAY	6	8	2				
	LIGHT GREY+YELLOW-WHITE CLAY	8	13	5				
F	SILTY YELLOW CLAY	13	17	4				
	DEPTH			17				
TRENCH 6							GROSS	ADJUSTED
					SAMPLE	OVER-	AU	AU
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE
A	GREY SOIL WITH BOULDERS	0	3	3				
C	GREY SAND AND CLAY W/ BOULDERS	3	6	3				
D	GREY BROWN CLAY, SANDY	6	8	2				
G	DECOMPOSED VOLCANICS	8	13	5	6	8	0.31	0.27
	(SAND+GREY CLAY)							
				13				
TRENCH 7							GROSS	ADJUSTED
					SAMPLE	OVER-	AU	AU
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE
T	TAILINGS	0	4	4	7	0	0.08	0.07
B	BLACK CLAY	4	5	1				
	TAN SILTY CLAY W/RED CLAY STREAKS	5	8	3				
F	SILTY YELLOW CLAY	8	15	7				
	DEPTH			15				
TRENCH 8-9							GROSS	ADJUSTED
					SAMPLE	OVER-	AU	AU
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE
T	TAILINGS	0	12	12	8	0	0.00001	0.00
B	BLACK CLAY	12	14	2	8		0.47	0.42
	DEPTH			14				

APPENDIX 19A. PLACER STRATIGRAPHY AND AMALGAMATION RESULTS								
PLACER SAMPLING		Au Fineness		0.93		GOLD VALUES IN OZ/BCY		
		Recovery Factor		0.95				
BODIE BOWL VALIDITY EXAMINATIONS		GOLD FINENESS		0.8835				
TRENCH 1							GROSS	ADJUSTED
					SAMPLE	OVER-	AU	AU
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE
A	GREY SOIL	0	1	1				
B	BLACK CLAY	1	10	9				
	LIGHT TAN CLAY	10	12	2				
E	GRAVEL-SAND-BOULDERS	12	17	5	1	12	0.035	0.03
	DEPTH			17				
TRENCH 2							GROSS	ADJUSTED
					SAMPLE	OVER-	AU	AU
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE
A	GREY SOIL	0	1	1				
B	BLACK CLAY	1	10	9				
	LIGHT TAN CLAY	0	0	0				
E	GRAVEL-SAND-BOULDERS	10	17	7	2	10	0.51	0.45
	DEPTH			17				
TRENCH 3								
					SAMPLE	OVER-	GROSS	ADJUSTED
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	AU	AU
A	GREY SOIL	0	1	1			VALUE	VALUE
B	BLACK CLAY	1	12	11				
	LIGHT TAN CLAY	0	0	0				
E	SAND	12	13	1	3	12	0.07	0.06
	DEPTH			13				
TRENCH 4							GROSS	ADJUSTED
					SAMPLE	OVER-	AU	AU
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE
A	GREY SOIL	0	2	2				
B	BLACK CLAY	2	4	2				
C	GREY SAND	4	6	2				
D+E	BOULDERS AND BROWN CLAY	6	8	2				
E	GREY SANDY GRAVEL	8	13	5	4	8	0.68	0.60
	DEPTH			13				

APPENDIX 19A. PLACER STRATIGRAPHY AND AMALGAMATION RESULTS									
TRENCH 10-11							GROSS	ADJUSTED	
					SAMPLE	OVER-	AU	AU	
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE	
A	SOIL AND ROCKY GRAVEL	0	2	2	10	0	1.69	1.49	Ground sluicing materials
	BROWN SANDY CLAY	2	4	2					
C	BROWN SANDY GRAVEL	4	6	2	11	4	0.15	0.13	
D	BROWN CLAY W/SAND	6	12	6					
F	YELLOW-WHITE CLAY	12	14	2					
	DEPTH			14					
TRENCH 12							GROSS	ADJUSTED	
					SAMPLE	OVER-	AU	AU	
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE	
A	REDDISH-BROWN SOIL	0	3.5	3.5					
	GRAY CLAY-SILT	3.5	5	1.5	12	3.5	0.11	0.10	at grey clay-soil interface
G	DECOMPOSED VOLCANIC	5	8	3					
	DEPTH			8					
TRENCH 13-14							GROSS	ADJUSTED	
					SAMPLE	OVER-	AU	AU	
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE	
A	REDDISH-BROWN SOIL	0	4	4	14	0	0.02	0.02	
	BLACK CLAY	0	0	0					
T	TAILINGS WITH CLAY	4	10	6	13	4	0.05	0.04	at grey sand-tailings interface
	DARK GREY SAND, SATURATED	10	11	1	13				
B	BLACK SILTY CLAY W/ VEGITATION	11	14	3					
	DEPTH			14					
TRENCH 15-16							GROSS	ADJUSTED	
					SAMPLE	OVER-	AU	AU	
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE	
T	TAILINGS	0	4	4	16	0	0.55	0.49	
B	BLACK CLAY	4	5	1					
C	SAND – GRAVEL – CLAY	5	6	1	15	5	0.28	0.25	
D AND E (?)	BROWN CLAY, HARD, SOME GRAVEL	6	10	4					
G	DECOMPOSED VOLCANIC	10	13	3					
	DEPTH			13					

APPENDIX 19A. PLACER STRATIGRAPHY AND AMALGAMATION RESULTS								
TRENCH 17-18							GROSS	ADJUSTED
					SAMPLE	OVER-	AU	AU
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE
T	TAILINGS	0	5	5	17	0	0.1	0.09
C	SAND + GRAVEL – CLAY	5	6	1	18	5	0.05	0.04
	GREY SAND	6	7	1				
G	DECOMPOSED VOLCANIC	7	8	1				
	DEPTH			8				
TRENCH 19-20							GROSS	ADJUSTED
					SAMPLE	OVER-	AU	AU
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE
T	TAILINGS	0	4.5	4.5				
T	YELLOW CLAY	4.5	5.5	1	19	4.5	0.32	0.28
B	GREEN-GREY CLAY	5.5	6	0.5				
D	BROWN SAND AND CLAY	6	8	2				
E	LITHIFIED GRAVEL	8	8.5	0.5	20	8	0.39	0.34
G	DECOMPOSED VOLCANIC	8.5	12	3.5				
	DEPTH			12				
TRENCH 21-22-23							GROSS	ADJUSTED
					SAMPLE	OVER-	AU	AU
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE
T	TAILINGS	0	6	6	21	0	0.08	0.07
B	BLACK CLAY	6	7	1				
C	GRAVEL + CLAY, SATURATED	7	8.5	1.5	22	7	0.11	0.10
D ?	BLACK CLAY #2	8.5	12	3.5				
E	BLACK GRAVEL W/LARGE BOULDERS	12	13	1	23	12	0.19	0.17
E	BROWN GRAVEL	13	15	2				
	DEPTH			15				

APPENDIX 19A. PLACER STRATIGRAPHY AND AMALGAMATION RESULTS

TRENCH 24-25-26							GROSS	ADJUSTED
					SAMPLE	OVER-	AU	AU
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE
T	TAILINGS	0	6	6	24	0	0.06	0.05
	DARK BROWN CLAY	6	8	2	25	6	0.33	0.29
B	BLACK SANDY CLAY	8	10.5	2.5				
C	GRAVEL	10.5	13	2.5	26	10.5	0.15	0.13
G	DECOMPOSED VOLCANICS	13	15	2				
	DEPTH			15				

TRENCH 27-28							GROSS	ADJUSTED
					SAMPLE	OVER-	AU	AU
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE
T	TA LINGS	0	5.5	5.5	27	0	0.000001	0.00
	DARK GREY BROWN CLAY	5.5	8	2.5				
B	BLACK SANDY CLAY	8	10.5	2.5				
C	COURSE GRAVEL	10.5	13	2.5	28	10.5	3.87	3.42
G	DECOMPOSED VOLCANICS	13	15	2				
	DEPTH			15				

TRENCH 29-30							GROSS	ADJUSTED
					SAMPLE	OVER-	AU	AU
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE
T	TA LINGS	0	4	4	29	0	0.07	0.06
B	BLACK CLAY	4	8	4				
C	GRAVEL AND BOULDERS	8	9.5	1.5	30	8	0.02	0.02
D AND E	BROWN GRAVELY SAND	9.5	11	1.5				
G	DECOMPOSED VOLCANICS	11	16	5				
	DEPTH			16				

TRENCH 31							GROSS	ADJUSTED
					SAMPLE	OVER-	AU	AU
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE
A	SOIL AND ROCK	0	2	2				
C	HARD CLAY AND ROCK WITH	2	3	1	31	2	0.39	0.34
	INDURATED GRAVEL			0				
	DEPTH			3				

APPENDIX 19A. PLACER STRATIGRAPHY AND AMALGAMATION RESULTS									
TRENCH 32							GROSS	ADJUSTED	
					SAMPLE	OVER-	AU	AU	
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE	
T	TAILINGS	0	2	2	32	0			(not run)
	GREY SILT	2	5	3					
G	VOLCANICS	5	7	2					
	DEPTH			7					
TRENCH 33-34-35							GROSS	ADJUSTED	
					SAMPLE	OVER-	AU	AU	
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE	
T	TAILINGS	0	4	4	33	0	0.02	0.02	
B	BLACK CLAY	0	0	0					
C	ROCK AND GRAVEL	4	8	4	34	4	0.02	0.02	
D	BROWN CLAY + SILT	8	9	1					
E	BOULDERS + GRAVEL + SAND	9	10	1	35	9	0.65	0.57	
G	DECOMPOSED VOLCANICS	10	12	2					
	DEPTH			12					
TRENCH 36							GROSS	ADJUSTED	
					SAMPLE	OVER-	AU	AU	
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE	
A	TAN SOIL	0	2.5	2.5					
	BROWN-TAN ROCK AND SOIL	2.5	3	0.5					
C	REDDISH GRAVEL AND ROCK	3	6	3	36	3	0.13	0.11	
G	DECOMPOSED VOLCANICS	6	7	1					
	DEPTH			7					
							GROSS	ADJUSTED	
TRENCH 37					SAMPLE	OVER-	AU	AU	
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE	
A	PLACER MATERIAL	0	6	6	37	0	0.07	0.06	Vindicator Lode
									Aurora Associate Placer
	DEPTH			6					

APPENDIX 19A. PLACER STRATIGRAPHY AND AMALGAMATION RESULTS									
TRENCH 38							GROSS	ADJUSTED	
					SAMPLE	OVER-	AU	AU	
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE	
A	SOIL	0	2	2					
	REDDISH SOIL + ROCK + SAND	2	5	3					
C	GREY CLAY AND SAND	5	9	4	38	5	0.04	0.04	Zeus 318 Lode
G	DECOMPOSED VOLCANICS	9	10	1					Aurora Associate Placer
	DEPTH			10					
TRENCH 39							GROSS	ADJUSTED	
					SAMPLE	OVER-	AU	AU	
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE	
A	SOIL	0	0	0					
B	BLACK CLAY	0	3	3					
E	GRAVEL + ROCK - CLAY (TAN/BLACK)	3	4	1	39	3	0.69	0.61	
E	TAN BROWN SAND	4	6.5	2.5					
G	DECOMPOSED VOLCANICS	6.5	8	1.5					
	DEPTH			8					
							GROSS	ADJUSTED	
TRENCH 40					SAMPLE	OVER-	AU	AU	
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE	
A	BODIE CREEK PLACER	0	1.5	1.5	40	0	0.07	0.06	Bodie Creek
									Aurora Associate Placer
	DEPTH			1.5					
TRENCH 41-42							GROSS	ADJUSTED	
					SAMPLE	OVER-	AU	AU	
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE	
A	SOIL AND GROUND SLUICING DEBRIS	0	6	6	41	0	0.29	0.26	
B	BLACK-BROWN SANDY CLAY	6	8	2					
C	BROWN ROCK + SAND + GRAVEL	8	10	2	42	8	4.02	3.55	
F	WHITE-YELLOW CLAY, SILTY	10	12	2					
G	DECOMPOSED VOLCANICS	12	13	1					
	DEPTH			13					

APPENDIX 19A. PLACER STRATIGRAPHY AND AMALGAMATION RESULTS									
TRENCH 43							GROSS	ADJUSTED	
					SAMPLE	OVER-	AU	AU	
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE	
A	SOIL	0	2	2					
B	BLACK CLAY	2	3	1					
	TAN SAND	3	5	2					
D	BROWN CLAY (SATURATED)	5	6	1					
E	GRAVEL	6	7	1	43	6		0.00	NOT RUN
	CLAY SAND	7	11	4					
	DEPTH			11					
TRENCH 44							GROSS	ADJUSTED	
					SAMPLE	OVER-	AU	AU	
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE	
A	SOIL	0	1	1					
B	BLACK CLAY	1	1.5	0.5					
	GREY CLAY SAND	1.5	3	1.5					
D	BLACK-BROWN CLAY	3	5	2					
E ?	DARK GREY-BROWN CLAY SILT	5	11	6	44	5		0.00	NOT RUN
F ?	YELLOW-BROWN CLAY SILT	11	13	2					
G	DECOMPOSED VOLCANIC	13	14	1					
	DEPTH			14					
TRENCH 45							GROSS	ADJUSTED	
					SAMPLE	OVER-	AU	AU	
		TOP	BOTTOM	THICKNESS	NUMBER	BURDEN	VALUE	VALUE	
A	SOIL	0	0.5	0.5					
B	BLACK CLAY	0.5	1	0.5					
	GREY CLAY SAND (SATURATED)	1	4	3					
D	BROWN CLAY	4	7	3					
E	DARK BROWN, SANDY CLAY + GRAVEL	7	12	5	45	7			NOT RUN
G	DECOMPOSED VOLCANIC	12	13	1					
	DEPTH			13					
SUMMARY OF FINDINGS			ADJUSTED						
			AU						
	TAILINGS		VALUE						
		SAMPLES	($/YD)						
		7	0.07						
		12	0.10						
		14	0.04						
		16	0.49	High					
		17	0.09						
		19	0.28						
		21	0.07						
		24	0.05						
		27	0.00						
		29	0.06						
		33	0.02						
		AVERAGE	0.12						

APPENDIX 19A. PLACER STRATIGRAPHY AND AMALGAMATION RESULTS												
					AREA	AVE	VOLUME	$/YD	GROSS	OVER	STRIPPING	OUNCES
					(FT-2)	THICKNESS	(YD-3)		VALUE	BURDEN	RATIO	AU
	GRAVEL "C"	5	0.04			(FT)						
		11	0.13									
		24	0.13									
		28	3.42									
		30	0.02									
		34	0.02									
		36	0.11		WEST AREA		Sample 42					
		42	3.55									
		AVERAGE	0.93		15000	1.5	833	$3.00	$2,500.00	3	2.0	6.5
					EAST AREA		Samples 28					
					17000	2.5	1574	$3.00	$4,722.22	10	4.0	12.3
	GRAVEL "E"	1	0.03									
		2	0.45									
		3	0.06									
		4	0.60									
		6	0.27									
		35	0.57									
		39	0.61									
		AVERAGE	0.28									

APPENDIX 19B: PLACER FIELD NOTES

See Spreadsheet file APPENDIX19B.xls

APPENDIX 19B. PLACER FIELD NOTES

sample #	bucket 1	bucket 2	bucket 3	bucket 4	bucket 5	bucket 6	total weight	conversion factor	Total Au (g)	Au per yd (oz)	$ per yd Au = $380	commments
1	83	56	74	59			272	3380	0.0023	0.000918896	0.349180488	wet
2	73	62	68	64			267	3380	0.0033	0.001343105	0.510380078	wet
3	64	70	80	71	65		350	3250	0.0007	0.00020898	0.079412285	wet sands
4	46	50	40	47	47	49	279	2920	0.0053	0.001783386	0.677686528	dry
5	56	47	35	45	44	59	286	2640	0.0004	0.00011871	0.045109937	sand, gravel, clay
6	37	44					81	2920	0.0007	0.00081131	0.308297645	sand clay gray decomposed volanics
7	44	49	47	44	40	55	279	2900	0.0006	0.00020051	0.076193755	tailings
8	64	56	59	67			246	1930	0.0049	0.001235973	0.469669779	clay gravel, dry
9	55	64	71	70			260	2900	0	0	0	tailings
10	55	49	52	50	55	50	311	2570	0.0167	0.004436903	1.686023176	soil rock gravel
11	54	52	46	46	55	46	299	3380	0.001	0.000399787	0.151919154	wet sand gravel
12	43	40	44	45	47	47	266	2210	0.001	0.000293829	0.111654867	clay silt
13	66	60	64	55	51	55	351	3250	0.0004	0.000119077	0.045249165	wet tailings sands
14	57	62	57	62	68	62	368	3250	0.0002	5.6788E-05	0.021579425	water saturated, wet tailings
15	46	42	67	47	48	53	303	1930	0.0036	0.000737238	0.280150574	brown clay some gravel
16	57	60	55	57	58	53	340	2900	0.0053	0.001453402	0.552292677	dry sand, tailings
17	45	43	42	47	52	50	279	2900	0.0008	0.000267347	0.101591674	dry sand, tailings
18	46	51	51	42	59	58	307	1930	0.0007	0.000141484	0.053763967	lt. brown clayey sand
19	35	49	55	63	66	63	331	2200	0.004	0.000854762	0.324809717	sat. siltly clay, lt brn
20	56	61	54	61	53	61	346	1930	0.0057	0.001022226	0.388445774	dry lt brn, silty clay
21	63	59	64	58	58	65	367	2980	0.0008	0.000208848	0.07936235	reddish brown, sandy clay moist tailings
22	64	65	60	61	64	61	375	3380	0.001	0.000289785	0.110118368	dk brn sandy clay tailings and gravel
23	69	62	61	65	73	72	402	2200	0.0028	0.000492658	0.187209978	dark brown to black clay, wet
24	67	59	63	63	67	72	391	2900	0.0007	0.000166921	0.06342984	light tan tailings
25	64	55	56	60	62	59	356	2250	0.0043	0.000873759	0.33202846	dark med. to dark gray damp clayey silt
26	59	57	56	60	62	56	350	2570	0.0017	0.000401333	0.152506493	med gray decomposed volanic rocks
28	59	62	59	59	56	60	355	3200	0.0351	0.010172307	3.865476848	black sandy clay, moist
29	56	49	53	56	47	58	319	2900	0.0006	0.000175368	0.06663968	tailing reddish brown silty snady clay dry to slightly moist
30	64	69	71	66	64	65	399	2920	0.0002	4.70577E-05	0.017881926	
31	35	57	58	60	56	59	325	1930	0.0054	0.001030999	0.391779802	lt brown silt with rocks frags, dry
33	61	66	66	62	59	63	377	2900	0.0002	4.94627E-05	0.018795807	lt brown sitty sand dry tailings
34	68	80	73	66	77	78	442	2920	0.0002	4.24797E-05	0.016142281	light brown rocky silty sandy dry rocks frags 1" - 4" dia. mostly chalcedony
35	67	73	66	68	73	71	418	2920	0.0076	0.001706911	0.648626214	dark brown rxy. sandy some clay, dry
36	58	65	61	62	65	61	372	2570	0.0015	0.000333175	0.126606434	lt brown gravel with some sand
37	74	68	64	70	63	71	410	2640	0.0009	0.000186317	0.070800596	tan gray sand and gravel and rx. chalcedony frags.
38	57	56	49	54	57	54	327	2640	0.0004	0.000103826	0.039453951	gray sand and gravel clay rich
39	71	72	75	61	79	73	431	2640	0.0092	0.001811779	0.688476021	black and brown sand and gravel very wet
40	49	45	48	41	52	47	282	2800	0.0006	0.000191536	0.072783763	Bodie Crk sample dark black organic sandy mud
41	79	75	74	78	68	72	446	2640	0.004	0.000761237	0.289269999	soil gravel
42	79	73	70	66	72	73	433	2920	0.0488	0.010580484	4.020583739	brown rocks sand gravel

APPENDIX 20: METALLURGICAL TESTING

See Spreadsheet file APPENDIX20.xls

APPENDIX 20. METALLURGICAL TESTING

Number	Au fire PPB	Au oz/t	Au oz/ton	percent +/-	Sample	Lengh x Au	Lengh x Au	
		Fire	Shake	Shk v Fire	Length (ft)	Shake	Fire	
1	487	0.015219	0.013	117.0673	1	0.013	0.015	
2	2801	0.087531	0.02	437.6563	15	0.300	1.313	
3	1582	0.049438	0.033	149.8106	9	0.297	0.445	
4	175	0.005469	0.005	109.375	14	0.070	0.077	
5	711	0.022219	0.014	158.7054	12	0.168	0.267	
6	100	0.003125	0.006	52.08333	10	0.060	0.031	
7	873	0.027281	0.027	101.0417	20	0.540	0.546	
8	136	0.00425	0.002	212.5	10.9	0.022	0.046	
9	6983	0.218219	0.1	218.2188	3.17	0.317	0.692	
10	349	0.010906	0.008	136.3281	8.41	0.067	0.092	
11	6684	0.208875	0.136	153.5846	6.08	0.827	1.270	
12	<10,000	0.313	0.244	128.2787	0.92	0.224	0.288	
13	538	0.016813	0.008	210.1563	17.58	0.141	0.296	
14	678	0.021188	0.013	162.9808	12.25	0.159	0.260	
15	246	0.007688	0.008	96.09375	9.5	0.076	0.073	
16	243	0.007594	0.005	151.875	13.34	0.067	0.101	
17	1812	0.056625	0.025	226.5	7.91	0.198	0.448	
				Totals	171.06	3.546	6.258	
				Average		0.0207283	0.037	
						Shake	Fire	

Selected samples sent for metallurgical testing:

Number	Au fire PPB	Au oz/t	Au oz/ton	percent +/-	Sample	Lengh x Au	Lengh x Au	
		Fire	Shake	Shk v Fire	Length (ft)	Shake	Fire	
1	487	0.015219	0.013	117.0673	1	0.013	0.015	
2	2801	0.087531	0.02	437.6563	15	0.300	1.313	
3	1582	0.049438	0.033	149.8106	9	0.297	0.445	
	175	0.005469	0.005	109.375	0	0.000	0.000	
5	711	0.022219	0.014	158.7054	12	0.168	0.267	
	100	0.003125	0.006	52.08333	0	0.000	0.000	
7	873	0.027281	0.027	101.0417	20	0.540	0.546	
	136	0.00425	0.002	212.5	0	0.000	0.000	
9	6983	0.218219	0.1	218.2188	3.17	0.317	0.692	
	349	0.010906	0.008	136.3281	0	0.000	0.000	
11	6684	0.208875	0.136	153.5846	6.08	0.827	1.270	
12	<10,000	0.313	0.244	128.2787	0.92	0.224	0.288	VEIN
	538	0.016813	0.008	210.1563	0	0.000	0.000	
14	678	0.021188	0.013	162.9808	12.25	0.159	0.260	
	246	0.007688	0.008	96.09375	0	0.000	0.000	
	243	0.007594	0.005	151.875	0	0.000	0.000	
17	1812	0.056625	0.025	226.5	7.91	0.198	0.448	
				Totals	87.33	3.043	5.542	
				Average		0.034849	0.063	
SILICA OR SULFIDE ENCAPSULATION						Shake	Fire	

APPENDIX 21: MASTER TITLE PLATS

21-2

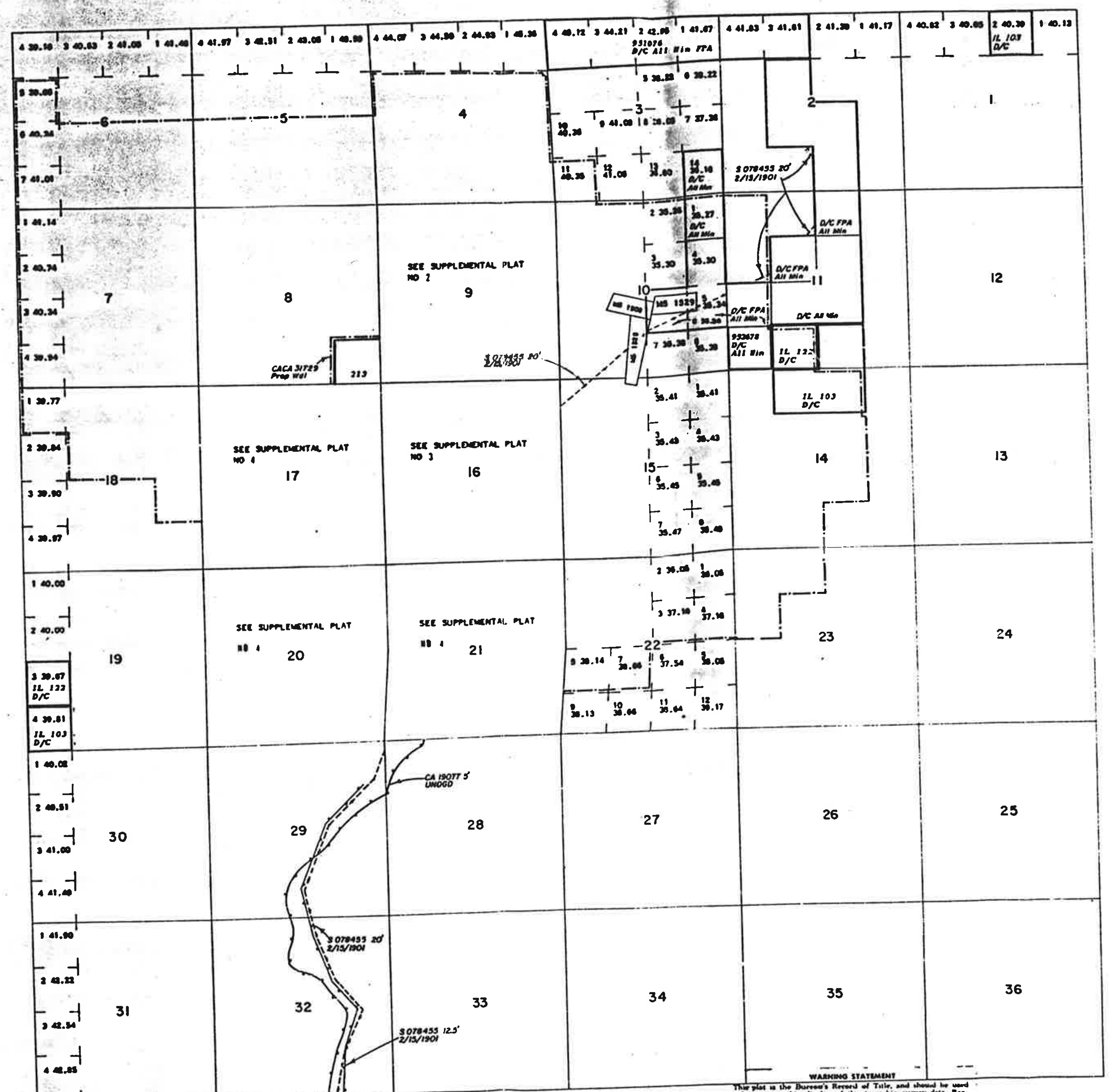
TOWNSHIP 4 NORTH RANGE 27 EAST OF THE MOUNT DIABLO MERIDIAN, CALIFORNIA

MONO COUNTY

BAKERSFIELD DIST. SEC 3
BISHOP RA

STATUS OF PUBLIC DOMAIN
LAND AND MINERAL TITLES

MT PLAT



WARNING STATEMENT
This plat is the Bureau's Record of Title, and should be used only as a graphic display of the township survey data. Records hereon do not reflect title changes which may have been effected by lateral movements of rivers or other bodies of water. Refer to the cadastral surveys for official survey information.

SCALE in Chains

INDEX TO SEGREGATED TRACTS

RESURVEY	ORIGINAL SURVEY			
TRACT NO	T	R	SEC	SUBDIVISION

All Tp included in Wdl for Cl EO 5843 4/28/1932

All Tp included in Wdl Calif Gr Dist No 1 BLM O 5/20/1976

Continued on Supplemental No 1

FOR ORDERS EFFECTING DISPOSAL OR USE OF UNIDENTIFIED LANDS REFER TO INDEX OF MISCELLANEOUS DOCUMENTS.

CURRENT TO	CURRENT TO

USE PLATS:

MD Mer
T. 4 N
R. 27 E

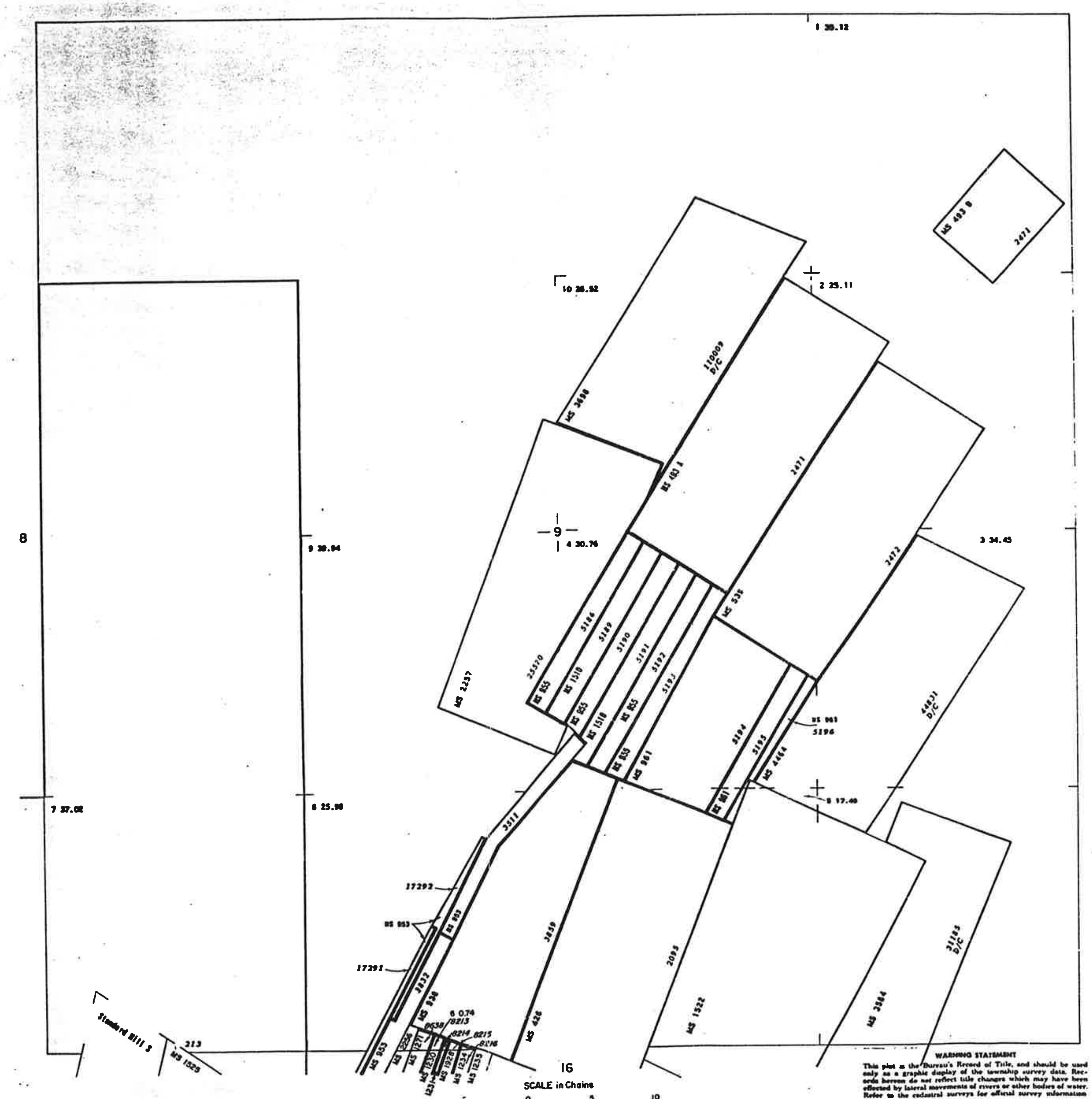
21-3

TOWNSHIP 4 NORTH RANGE 27 EAST OF THE MOUNT DIABLO MERIDIAN, CALIFORNIA

MONO COUNTY
BAKERSFIELD DIST. SEC 3
BISHOP RA
4

NO 2
STATUS OF PUBLIC DOMAIN
LAND AND MINERAL TITLES

MTP
SUPPL Sec 9



INDEX TO SEGREGATED TRACTS				
RESURVEY	ORIGINAL SURVEY			
TRACT NO	T	R	SEC	SUBDIVISION

All Sec 9 included in Wdl for Cl EO 5843
4/28/1932

All Sec 9 included in Wdl Calif Gr Dist No 1
BLM O 5/20/1976

CACA 31729 Wdl Bodie Bowl
Sec 9: All Public Land

FOR ORDERS EFFECTING DISPOSAL OR USE OF UNIDENTIFIED LANDS REFER TO INDEX OF MISCELLANEOUS DOCUMENTS.

CURRENT TO	CURRENT TO

USE PLATS:

NO 2

WARNING STATEMENT

This plat is the Bureau's Record of Title, and should be used only as a graphic display of the township survey data. Records hereon do not reflect title changes which may have been effected by lateral movements of rivers or other bodies of water. Refer to the cadastral surveys for official survey information.

MD Mer
T. 4 N
R. 27 E

TOWNSHIP 4 NORTH RANGE 27 EAST OF THE MOUNT DIABLO MERIDIAN, CALIFORNIA

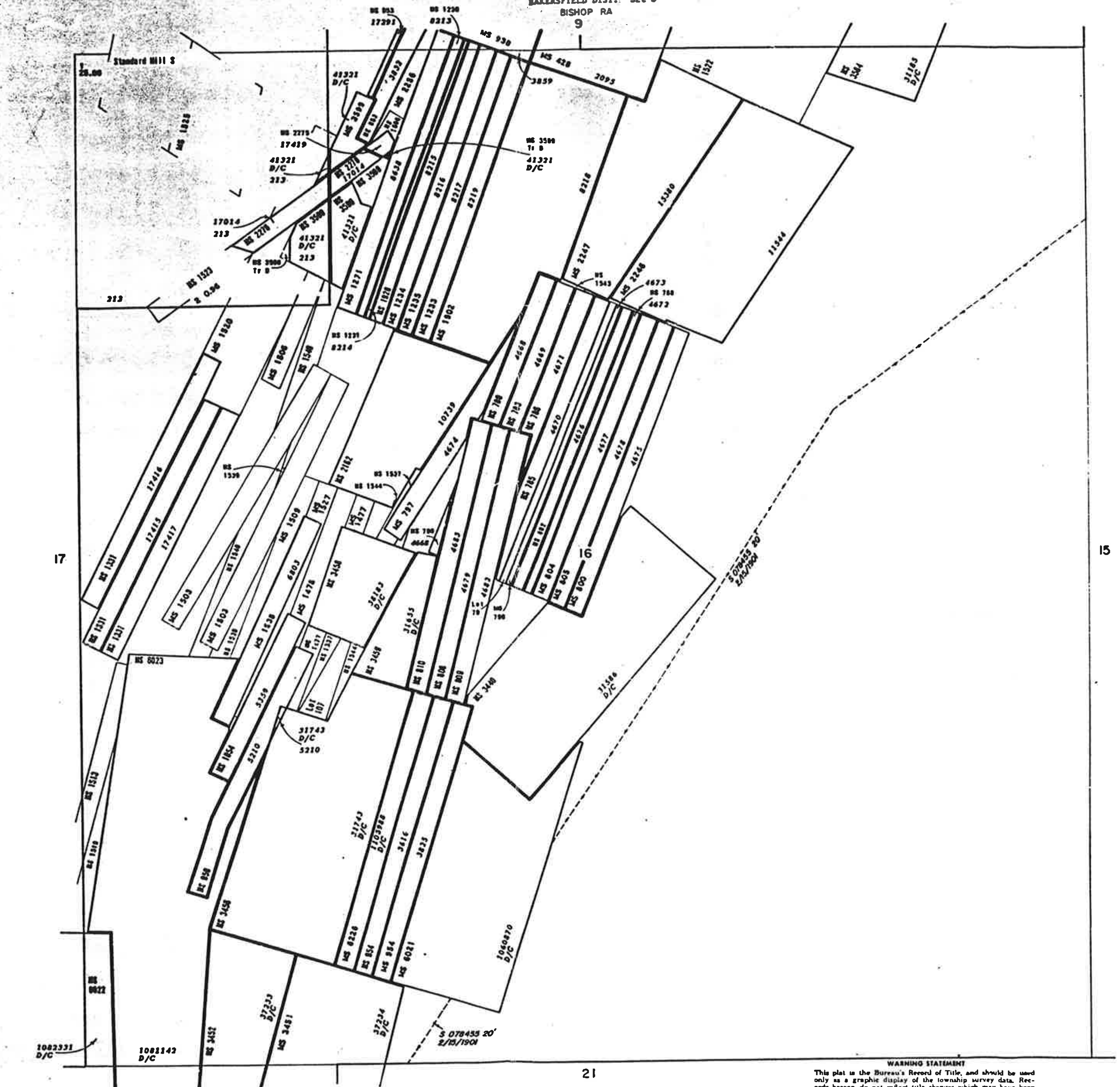
21-4

MONO COUNTY

BAKERSFIELD DIST. SEC 3
BISHOP RA

NO 3
STATUS OF PUBLIC DOMAIN
LAND AND MINERAL TITLES

MTP
SUPPL Sec 16



SCALE in Chains
5 0 5 10

WARNING STATEMENT

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INDEX TO SEGREGATED TRACTS

RESURVEY	ORIGINAL SURVEY			
TRACT NO	T	R	SEC	SUBDIVISION

CACA 31729 Wdl Bodie Bowl
Sec 16: All Public Land

All Sec 16 included in Wdl for Cl EO 5843
4/28/1932

All Sec 16 included in Wdl Calif Gr Dist No 1
BLM O 5/20/1976

FOR ORDERS EFFECTING DISPOSAL OR USE OF UNIDENTIFIED LANDS REFER TO INDEX OF MISCELLANEOUS DOCUMENTS.

CURRENT TO	CURRENT TO

USE PLATS:

NO

MD Mer
T. 4 N
R. 27 E

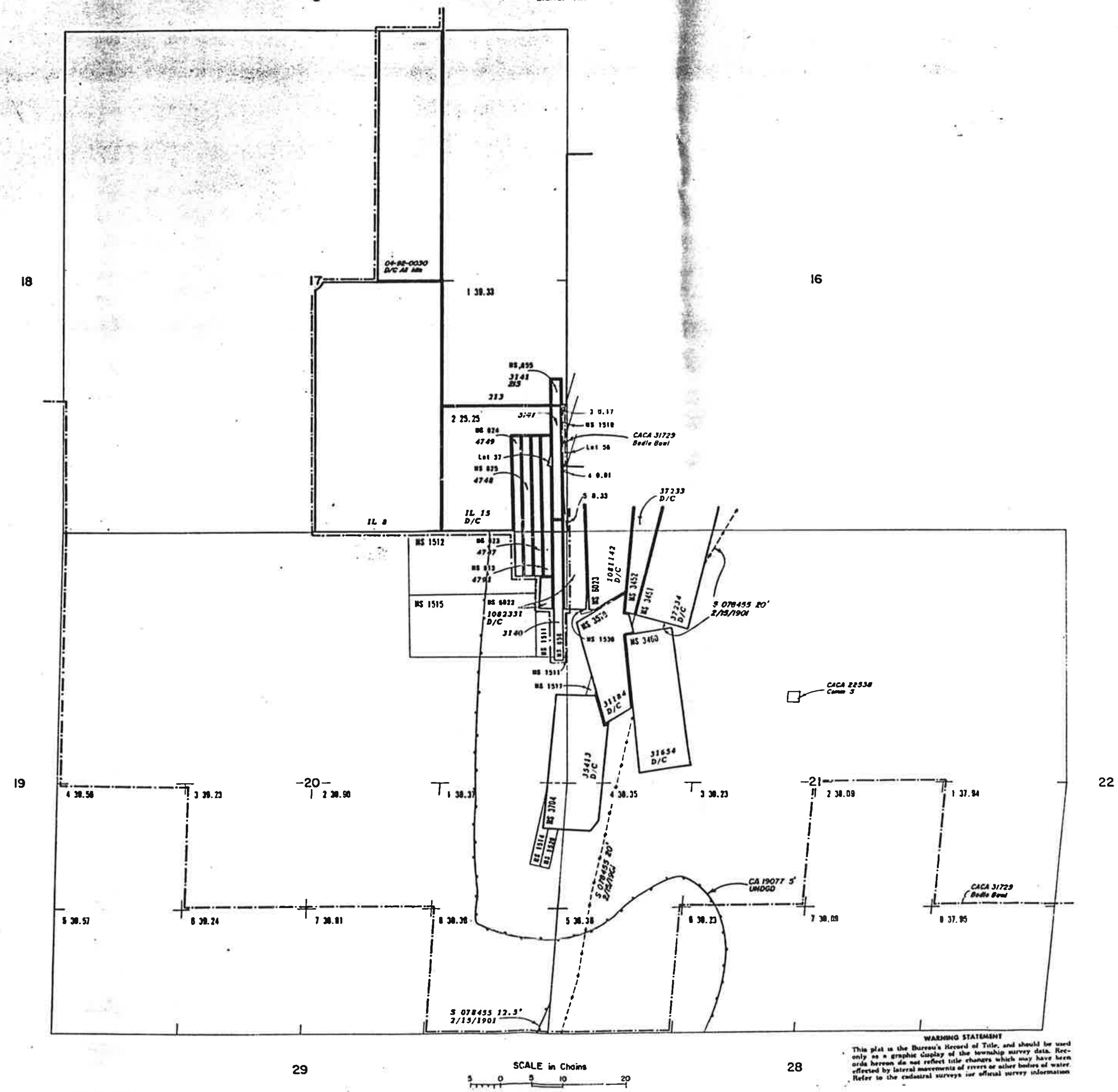
21-5

TOWNSHIP 4 NORTH RANGE 27 EAST OF THE MOUNT DIABLO MERIDIAN, CALIFORNIA

MONO COUNTY

BAKERSFIELD DIST. SEC 3

BISHOP RA



WARNING STATEMENT

This plat is the Bureau's Record of Title, and should be used only as a graphic display of the township survey data. Records hereon do not reflect title changes which may have been effected by lateral movements of rivers or other bodies of water. Refer to the cadastral surveys for official survey information

NO 4

STATUS OF PUBLIC DOMAIN LAND AND MINERAL TITLES

MTP

SUPPL Sec 17,20,21

INDEX TO SEGREGATED TRACTS				
RESURVEY	ORIGINAL SURVEY			
TRACT NO	T	R	SEC	SUBDIVISION

All Secs 17 20 21 included in Wdl for Cl
EO 5843 4/28/1932

All Secs 17 20 21 included in Wdl Calif Gr Dist
No 1 BLM O 5/20/1976

FOR ORDERS EFFECTING DISPOSAL OR USE OF UNIDENTIFIED LANDS REFER TO INDEX OF MISCELLANEOUS DOCUMENTS.

CURRENT TO	CURRENT TO

USE PLATS:

NO 4

MD Mer

T. 4 N

R. 27 E

TOWNSHIP 4 NORTH RANGE 26 EAST OF THE MOUNT DIABLO MERIDIAN, CALIFORNIA

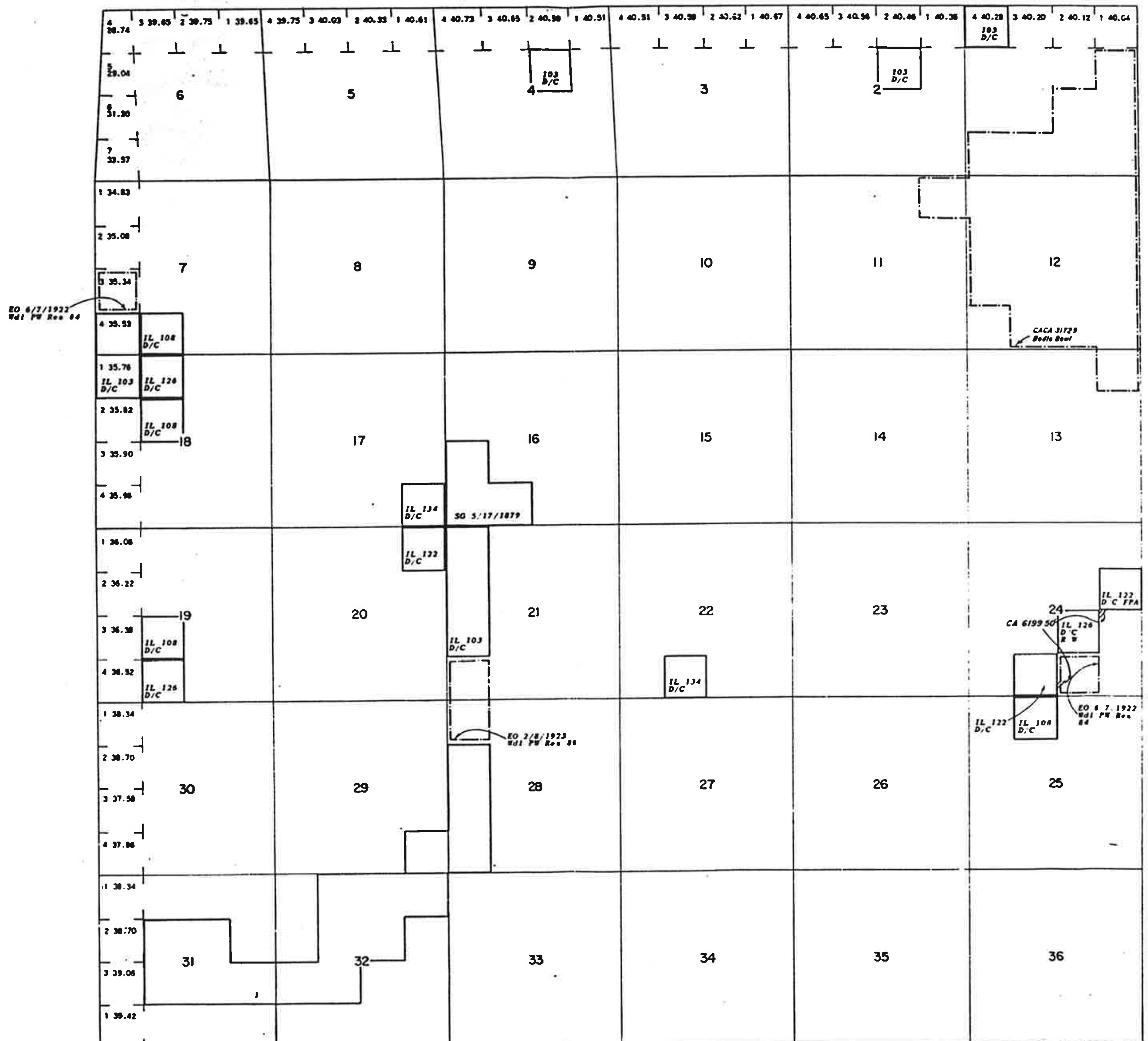
21-6

MONO COUNTY

BAKERSFIELD DIST. SEC 3
BISHOP RA

STATUS OF PUBLIC DOMAIN
LAND AND MINERAL TITLES

MT PLAT



WARNING STATEMENT
This plat is the Bureau's Record of Title, and should be used only as a graphic display of the township survey data. Records hereon do not reflect title changes which may have been effected by lateral movements of rivers or other bodies of water. Refer to the cadastral surveys for official survey information.

SCALE in Chains
10 5 0 10 20 30 60

INDEX TO SEGREGATED TRACTS

RESURVEY	ORIGINAL SURVEY			
TRACT NO	T	R	SEC	SUBDIVISION

All Tp included in Wdl Calif Gr Dist No 1
BLM O 5/20/1976

All Tp included in Wdl for Cl in Aid of Legislation
EO 5843 4/28/1932

FOR ORDERS EFFECTING DISPOSAL OR USE OF UNIDENTIFIED LANDS REFER TO INDEX OF MISCELLANEOUS DOCUMENTS

CURRENT TO	CURRENT TO

USE PLATS:

MD Me
T. 4 N
R. 26 E

APPENDIX 22: WATER AVAILABILITY CALCULATIONS

The project requires 400 gallons per minute.

Wells in the Bodie Bowl produce 8 gallons per minute (gpm). So it will require (400/8) = 50 wells.

Water availability in the Bodie region is calculated as follows:

One cubic foot equals 7.49 gallons. At 2% fracture porosity, one cubic foot has a water holding capacity of (.02 x 7.49) = 0.1498 gallon per cubic foot.

With 43,560 square feet in an acre, there is (43,560 x .1498) = 6,525.288 gallons that can be stored in one acre foot of volcanic rock in the Bodie area.

One square mile, or one Section, has 640 acres. So there are (6,525 x 640) = 4,176,000 gallons which are held in a volume of rock with dimensions of 1 mile x 1 mile by 1 foot.

The entire project needs 400 gpm X 60 min. X 24 hours = 576,000 gallons per day (gpd)

576,000 gpd at 365 days per year equals 210,240,000 gallons per year (gpy).

If the project lasts 20 years a total of (210,240,000 gpy x 20 y) = 4,204,800,000 gallons are needed.

4,204,800,000 gallons divided by 6,525 gallons of water per acre foot or rock equals 644,414 acre feet. This is the volume needed over the lifetime of the project.

Dividing 644,385 acre feet by 640 acres (1 square mile) equals a depth 1006.87 feet. Fifty wells this deep, spread over an area of 1 square mile would supply all the water needed for the project.

However, porosity generally decreases with depth in igneous rocks, and it is likely that 500 feet is the maximum depth at which water will occur. The optimum depth for withdrawal of water in this area is assumed to be between 150 and 400 feet.

If the wells are only 400 feet deep, with perforations from 150 to 400 feet, then (1007/250) = 4 square miles, or sections, would be needed, having (50/4) = 12 to 13 wells in each section.

With 10% infiltration rate and a dry year annual rainfall of 7.26 inches, there would be 0.73 inches of infiltration each year.

One cubic foot of rock has a volume of 7.49 gallons.

0.73 inches of infiltration is (.73 in x 12 in x 12 in) = 105.12 cubic inches of water per square foot of rock..

There are 12 x 12 x 12 = 1,728 cubic inches in a cubic foot.

So there is 105/1728 = .0608 or 6.1 percent water saturation of the fractured volcanic rock due to infiltration.

Since the rock is estimated to have 2% fracture porosity, or about 34 cubic inches porosity per cubic foot of rock), the average infiltration rate is enough to re-saturate a thickness of about 3 feet of rock.

In other words the infiltration rate is about three times the available fracture porosity and annual infiltration will replenish (6/2) = 3 feet of fractured volcanic aquifer. At this rate, the entire aquifer (from 150 to 400 feet) would be replenished in (250/3) = 83.3 years.

This analysis neglects entirely the fact that there is some water balance in the area now, before new ground water withdrawals begin. It does not consider the effects that the envisioned pumping program may have on natural ground water recharge in the area. It is possible that when drilling the 50 wells, one or more may encounter one or more major fracture zones that could supply water at greater pumping rates thatn 8 gpm. That possibility is not addressed in our analysis.

This analysis was made only to document that it is reasonable to assume that there is enough water near and within the Bodie Bowl to support a large-scale mining project.

APPENDIX 23. TECHBASE ANALYSIS

December 11, 1997

To: File

From: Larry M. Vredenburgh, geologist

Subject: Bodie ore deposit and mine modelling

I. Ore Deposit Modelling

A. Data

Data was obtained from Amax Gold Corp., which in 1990 had an option on the Bodie property. The information had been translated for us from the MEDSYSTEM to TECHBASE format. Data for five additional drill holes were entered by hand. All modelling was conducted using TECHBASE by myself.

The database obtained from Amax Gold Corp. was obtained by Amax from Bodie Consolidated Mining Company, this database included assays from underground workings. The underground information in most cases was no more recent than 50 years, and some of it nearly 100 years old. Gordon Gumble with Bodie Consolidated described the methodology used to massage the information into an accurate and usable format. However many assumptions were made to arrive at the numbers they used. I attempted to use this information, but the results of the floating cone analysis (mine modelling) seemed to assign undue weight to this information resulting in minable blocks where no drill data existed. For this reason underground data was not used.

B. The Model

A computer model was constructed which measures 3,700 feet north-south, by 2,400 feet east-west, by 1,000 feet deep. The model is offset 30 degrees east of north, to align with the structure of the faults and quartz veins. Blocks are 25 foot cubes.

1. Preparation of Variogram

a. Composites

With only few exceptions, the drill hole assay length was five feet. Since this is the case, drill assay data was composited to a length of five feet. An indicator field was created in the TECHBASE database to mark the gold composite with a 1 if above the cutoff value for each grade range and a 0 if below. It is the indicator which is estimated by kriging to the blocks.

b. Variograms

A variogram model was calculated for each grade range (see below) using the indicator field. The variogram model is used in Kriging the data to estimate the grade of blocks between data points. An omni-directional variogram was calculated with 0 degrees dip, 0 degrees azimuth, and 90 degrees

tolerance. A lag distance of 10 feet and a range of 550 feet were used. All drill data was used. High grade assays were not eliminated. A total of 17,677 composites were used in the calculations.

The variogram was modeled using the TECHBASE module Vario. The models for the five variograms were derived by graphically fitting the model to the plot of the assay data in the indicator fields. The plots of the data are attached. The plots of the models were not preserved. The results of the variogram models are as follows:

Variogram Models			
Grade Range	Type	Sill	X Range (feet)
> 0 <.005	Nugget Spherical Spherical	.1 .07 .051	 70 300
>=.005 <.013	Nugget Spherical Spherical	.16 .052 .02	 80 500
>=.013 <.045	Nugget Spherical Spherical	.08 .025 .016	 50 300
>=.045 <.17	Nugget Spherical Spherical	.035 .017 .009	 30 100
>=.17 <5.0	Nugget Spherical	.01 .004	 20

Multiple Indicator Kriging

As mentioned above Kriging is a statistical method of determining the portion of each block within each data range. A grade of 0.018 ounces of gold per ton was used as a cutoff. Therefore grades below .018 were not used in kriging, though data is presented here for completeness

The search ellipse was inclined at 30 degrees east of north, it was 300 feet north-south, 150 feet east-west, and 30 feet vertical. A maximum of 25 samples and a minimum of 3 were used. The indicator field for each grade range was kriged.

Five levels were selected. Each level represents approximately the same total amount of gold:

Gold grade	Average grade of composite assays
> 0 <.005	.0018
>=.005 <.018	.0089
>=.018 <.045	.0272
>=.045 <.17	.0804
>=.17 <5.0	.4495

Mine Modelling

Once the size, shape and grade of the mineral deposit was determined, the next step was to determine if it could be profitably mined. A floating cone modeling approach using the Opcone module withing TECHBASE was used. Two runs were made, for the geologic resources model, no economics were used, all block portions above .018 ounces per ton were evaluated. Economic parameters for the model were developed by Gregg Wilkerson. For the mine model the following assumptions were used:

Rock Density: 13 cubic feet per ton.cubic foot
Price of Gold: $400
Recovery factor 95%
Cut off grade of .018 ounces per ton
Cost of mining and processing ore: $ 10.08
Cost of moving waste: $2.21
Pit Wall slope: 58 degrees

The results of these two runs are as follows:

Measured Reserves

- Tons of ore: 33,942,707
- Tons of Waste: 44,548,290
- Grade of ore: 0.035 oz/ton
- Contained gold: 1,187,990 ounces
- Stripping ratio: 1:1.31

Inferred Resources

- Tons of mineralized rock: 88,151,164
- Tons of waste: 120,142,100
- Grade of mineralized rock: .023 oz/ton gold
- Contained gold: 2,027,476 ounces
- Stripping ratio: 1:1.36

Techbase Mine Modelling Results

Deposit	Av. oz/ton	Ore (tons)	Waste (tons)	Contained Gold	Ore:Waste Ratio
Total Deposit	.035	33,942,706	44,548,289	1,187,990	1:1.31
Blue Point	.038	195,575	181,030	7,432	1:0.93
Georgia	.032	1,414,859	1,476,485	45,275	1:1.04
Transit	.009	19,295	183,275	174	1:9.48
Belvedere	.022	2,244,484	3,853,356	49,378	1:1.71
Texas	.027	478,339	597,153	12,915	1:1.25
Central Pacific	.008	168,327	813,839	1,346	1:4.83

No other claims have ore reserves

Measured Reserves

BENCH	NET_VALUE	NET_TONS	mi_gradetons_mineraltons_waste		
8980	0	0.00	0.000	0.0	0.0
8955	-1512789	774038.46	0.012	232589.9	726572.1
8930	-2404027	1159855.77	0.013	353087.0	1110932.7
8905	-1225136	1412259.62	0.031	522974.2	1241028.1
8880	1885890	1551682.69	0.047	680505.7	1233589.8
8855	11404852	1657451.92	0.062	824794.6	1080268.8
8830	5920775	1748798.08	0.048	802613.3	1227978.5
8805	7858312	1629807.69	0.052	811479.4	914012.8
8780	5954171	1716346.15	0.042	931882.7	1142161.5
8755	2562478	1983173.08	0.030	1137494.2	1385035.9
8730	-1971374	2177884.62	0.025	1246901.2	1853482.0
8705	2241295	2447115.38	0.047	1398228.9	1964315.1
8680	5807211	2586538.46	0.036	1667733.8	1785331.6
8655	1776680	2651442.31	0.027	1784212.0	2118954.9
8630	-1129013	3034855.77	0.022	1789006.6	2531862.0
8605	-3389343	3296875.00	0.018	1708163.5	2803656.9
8580	2731083	3442307.69	0.027	1740999.9	2702786.7
8555	9494387	3200721.15	0.041	1468065.2	2351652.5
8530	6609500	2915865.38	0.036	1437308.3	2154216.2
8505	2926360	2769230.77	0.028	1358387.7	1972937.7
8480	3219231	2603365.38	0.035	1238338.3	1731408.6
8455	4100289	2407451.92	0.037	1233338.4	1562786.1
8430	1336346	2118990.38	0.032	1126400.6	1497318.9
8405	5596154	1926682.69	0.036	1108767.5	1458702.5
8380	8210343	1802884.62	0.043	1212511.7	999814.8
8355	9836271	1614182.69	0.048	1145584.4	782529.2
8330	3503045	1420673.08	0.037	994060.4	909739.8
8305	-277768	1294471.15	0.023	890245.2	1034683.2
8280	1222517	1175480.77	0.031	886502.2	812744.3
8255	2843138	895432.69	0.033	616588.0	549968.8
8230	5695765	780048.08	0.044	537868.2	451046.3
8205	3838619	638221.15	0.043	424309.9	311414.7
8180	5018660	364182.69	0.076	268813.1	144125.0
8155	10758847	262019.23	0.135	259584.8	2434.5
8130	5232520	102163.46	0.160	103366.0	-1202.5
8105	0	0.00	0.000	0.0	0.0
Total	125675289	61562500.00	0.035	33942706.7	44548289.8

Blue Point

BENCH	NET_VALUE	NET_TONS	mi_grade	tons_ore	tons_waste
8980	0	0.00	0.000	0	0.0
8955	0	0.00	0.000	0	0.0
8930	0	0.00	0.000	0	0.0
8905	0	0.00	0.000	0	0.0
8880	0	0.00	0.000	0	0.0
8855	0	0.00	0.000	0	0.0
8830	0	0.00	0.000	0	0.0
8805	0	0.00	0.000	0	0.0
8780	0	0.00	0.000	0	0.0
8755	0	0.00	0.000	0	0.0
8730	-106250	48076.92	0.015	0	48076.9
8705	203581	122596.15	0.033	46670	75926.3
8680	1306885	161057.69	0.053	134990	26068.0
8655	-23354	13221.15	0.015	1214	12007.5
8630	-32115	22836.54	0.010	4567	18269.1
8605	95422	10817.31	0.051	10135	682.4
8580	0	0.00	0.000	0	0.0
8555	0	0.00	0.000	0	0.0
8530	0	0.00	0.000	0	0.0
8505	0	0.00	0.000	0	0.0
8480	0	0.00	0.000	0	0.0
8455	0	0.00	0.000	0	0.0
8430	0	0.00	0.000	0	0.0
8405	0	0.00	0.000	0	0.0
8380	0	0.00	0.000	0	0.0
8355	0	0.00	0.000	0	0.0
8330	0	0.00	0.000	0	0.0
8305	0	0.00	0.000	0	0.0
8280	0	0.00	0.000	0	0.0
8255	0	0.00	0.000	0	0.0
8230	0	0.00	0.000	0	0.0
8205	0	0.00	0.000	0	0.0
8180	0	0.00	0.000	0	0.0
8155	0	0.00	0.000	0	0.0
8130	0	0.00	0.000	0	0.0
8105	0	0.00	0.000	0	0.0
Total	1444168	378605.77	0.038	197575	181030.3

Georgia

BENCH	NET_VALUE	NET_TONS	mi_grade	tons_mineral	tons_waste
8980	0	0.00	0.000	0.0	0.0
8955	0	0.00	0.000	0.0	0.0
8930	0	0.00	0.000	0.0	0.0
8905	0	0.00	0.000	0.0	0.0
8880	0	0.00	0.000	0.0	0.0
8855	0	0.00	0.000	0.0	0.0
8830	0	0.00	0.000	0.0	0.0
8805	-7969	3605.77	0.009	2405.1	3605.8
8780	-92969	42067.31	0.009	18486.7	42067.3
8755	-268281	121394.23	0.012	57667.1	121394.2
8730	-340000	153846.15	0.015	104197.9	153846.2
8705	124279	195913.46	0.030	151528.7	90891.9
8680	408518	230769.23	0.034	143573.1	131817.9
8655	-57812	241586.54	0.028	166865.5	180689.2
8630	-218976	296875.00	0.024	159217.4	208580.7
8605	503945	286057.69	0.034	145596.4	193167.1
8580	1579068	236778.85	0.049	165608.2	76071.2
8555	386754	146634.62	0.036	103815.2	77694.1
8530	-228438	103365.38	0.015	79793.1	103365.4
8505	349804	80528.85	0.045	57743.1	36735.1
8480	442956	70913.46	0.071	35032.4	35881.1
8455	427088	44471.15	0.081	23329.6	21141.5
8430	0	0.00	0.000	0.0	0.0
8405	0	0.00	0.000	0.0	0.0
8380	0	0.00	0.000	0.0	0.0
8355	0	0.00	0.000	0.0	0.0
8330	0	0.00	0.000	0.0	0.0
8305	0	0.00	0.000	0.0	0.0
8280	0	0.00	0.000	0.0	0.0
8255	0	0.00	0.000	0.0	0.0
8230	0	0.00	0.000	0.0	0.0
8205	0	0.00	0.000	0.0	0.0
8180	0	0.00	0.000	0.0	0.0
8155	0	0.00	0.000	0.0	0.0
8130	0	0.00	0.000	0.0	0.0
8105	0	0.00	0.000	0.0	0.0
Total	3007967	2254807.69	0.032	1414859.5	1476948.5

Transit

BENCH	NET_VALUE	NET_TONS	mi_grade	tons_mineral	tons_waste
8980	0	0.00	0.000	0.0	0.0
8955	0	0.00	0.000	0.0	0.0
8930	0	0.00	0.000	0.0	0.0
8905	0	0.00	0.000	0.0	0.0
8880	0	0.00	0.000	0.0	0.0
8855	0	0.00	0.000	0.0	0.0
8830	0	0.00	0.000	0.0	0.0
8805	0	0.00	0.000	0.0	0.0
8780	0	0.00	0.000	0.0	0.0
8755	0	0.00	0.000	0.0	0.0
8730	0	0.00	0.000	0.0	0.0
8705	0	0.00	0.000	0.0	0.0
8680	0	0.00	0.000	0.0	0.0
8655	0	0.00	0.000	0.0	0.0
8630	0	0.00	0.000	0.0	0.0
8605	-21250	9615.38	0.000	0.0	9615.4
8580	-66406	30048.08	0.000	0.0	30048.1
8555	-55781	25240.38	0.001	180.6	25240.4
8530	-45156	20432.69	0.001	203.6	20432.7
8505	-44975	20432.69	0.003	202.8	20358.7
8480	-29755	16826.92	0.015	845.1	16136.7
8455	7303	13221.15	0.031	4400.0	11053.1
8430	-13156	13221.15	0.026	3289.6	12252.1
8405	-21250	9615.38	0.014	2245.5	9615.4
8380	-21250	9615.38	0.009	3083.1	9615.4
8355	-15938	7211.54	0.010	2295.5	7211.5
8330	-2425	4807.69	0.028	605.9	4484.0
8305	-10625	4807.69	0.009	1066.3	4807.7
8280	-5312	2403.85	0.012	877.5	2403.8
8255	0	0.00	0.000	0.0	0.0
8230	0	0.00	0.000	0.0	0.0
8205	0	0.00	0.000	0.0	0.0
8180	0	0.00	0.000	0.0	0.0
8155	0	0.00	0.000	0.0	0.0
8130	0	0.00	0.000	0.0	0.0
8105	0	0.00	0.000	0.0	0.0
Total	-345978	187500.00	0.009	19295.6	183275.0

Belvedere

BENCH	NET_VALUE	NET_TONS	mi_grade	tons_mineral	tons_waste
8980	0	0.00	0.000	0.0	0.0
8955	0	0.00	0.000	0.0	0.0
8930	0	0.00	0.000	0.0	0.0
8905	0	0.00	0.000	0.0	0.0
8880	0	0.00	0.000	0.0	0.0
8855	0	0.00	0.000	0.0	0.0
8830	0	0.00	0.000	0.0	0.0
8805	0	0.00	0.000	0.0	0.0
8780	73930	15625.00	0.044	12400.2	3224.8
8755	158515	51682.69	0.036	45906.7	14865.3
8730	-178157	84134.62	0.022	60630.6	81612.1
8705	-252557	118990.38	0.016	56718.2	117282.2
8680	507767	155048.08	0.038	58087.7	122069.4
8655	-187700	206730.77	0.017	81546.9	186489.1
8630	-603199	275240.38	0.011	82444.3	273326.7
8605	-681794	346153.85	0.012	71323.8	327723.7
8580	-683016	391826.92	0.014	90714.8	351304.6
8555	-792502	379807.69	0.011	97600.7	377390.0
8530	-677126	362980.77	0.014	119202.9	349079.2
8505	655876	344951.92	0.028	167498.1	189041.2
8480	577825	326923.08	0.030	164980.3	192541.8
8455	-393604	295673.08	0.020	166103.3	236918.9
8430	-126572	281250.00	0.023	134799.2	185848.5
8405	-483602	243990.38	0.018	151611.5	224513.1
8380	1460578	225961.54	0.044	203449.7	36465.5
8355	2157630	192307.69	0.057	171484.9	42957.5
8330	379901	155048.08	0.030	92758.1	93443.1
8305	-41994	135817.31	0.024	91339.1	102564.1
8280	-244375	110576.92	0.015	83075.8	110576.9
8255	-185938	84134.62	0.001	2090.3	84134.6
8230	-159375	72115.38	0.000	1201.9	72115.4
8205	-111562	50480.77	0.000	0.0	50480.8
8180	112137	40865.38	0.020	13269.6	27595.8
8155	1418879	24038.46	0.181	24245.9	-207.5
8130	0	0.00	0.000	0.0	0.0
8105	0	0.00	0.000	0.0	0.0
Total	1699966	4972355.77	0.022	2244484.5	3853356.8

Central Pacific

BENCH	NET_VALUE	NET_TONS	mi_grade	tons_mineral	tons_waste
8980	0	0.00	0.000	0.0	0.0
8955	0	0.00	0.000	0.0	0.0
8930	0	0.00	0.000	0.0	0.0
8905	0	0.00	0.000	0.0	0.0
8880	0	0.00	0.000	0.0	0.0
8855	0	0.00	0.000	0.0	0.0
8830	0	0.00	0.000	0.0	0.0
8805	0	0.00	0.000	0.0	0.0
8780	4813	10817.31	0.029	8069.2	5180.0
8755	-71719	32451.92	0.018	22386.5	32451.9
8730	-95728	50480.77	0.023	26009.2	45635.6
8705	-118479	67307.69	0.017	28298.7	63156.8
8680	-156158	70913.46	0.007	14003.2	70684.6
8655	-196562	88942.31	0.003	5285.2	88942.3
8630	-250213	114182.69	0.005	869.6	113313.1
8605	-246880	116586.54	0.005	1032.5	115554.0
8580	-242736	110576.92	0.002	3848.2	109949.4
8555	-180625	81730.77	0.000	0.0	81730.8
8530	-116875	52884.62	0.002	8747.5	52884.6
8505	86770	48076.92	0.019	19208.1	28868.8
8480	43387	22836.54	0.028	18958.7	5078.9
8455	11050	7211.54	0.031	6955.2	256.4
8430	12544	4807.69	0.034	4655.5	152.2
8405	0	0.00	0.000	0.0	0.0
8380	0	0.00	0.000	0.0	0.0
8355	0	0.00	0.000	0.0	0.0
8330	0	0.00	0.000	0.0	0.0
8305	0	0.00	0.000	0.0	0.0
8280	0	0.00	0.000	0.0	0.0
8255	0	0.00	0.000	0.0	0.0
8230	0	0.00	0.000	0.0	0.0
8205	0	0.00	0.000	0.0	0.0
8180	0	0.00	0.000	0.0	0.0
8155	0	0.00	0.000	0.0	0.0
8130	0	0.00	0.000	0.0	0.0
8105	0	0.00	0.000	0.0	0.0
Total	-1517411	879807.69	0.008	168327.4	813839.3

Texas

BENCH	NET_VALUE	NET_TONS	mi_grade	tons_mineral	tons_waste
8980	0	0.00	0.000	0.0	0.0
8955	0	0.00	0.000	0.0	0.0
8930	0	0.00	0.000	0.0	0.0
8905	0	0.00	0.000	0.0	0.0
8880	0	0.00	0.000	0.0	0.0
8855	0	0.00	0.000	0.0	0.0
8830	-95625	43269.23	0.000	0.0	43269.2
8805	-230751	116586.54	0.005	28702.0	111359.3
8780	474766	191105.77	0.032	149608.6	105781.5
8755	157183	198317.31	0.027	143393.3	120258.6
8730	228178	145432.69	0.036	89455.2	96026.1
8705	173781	84134.62	0.056	43762.5	65170.1
8680	-53125	24038.46	0.016	10643.4	24038.5
8655	-34531	15625.00	0.018	6609.2	15625.0
8630	-18594	8413.46	0.016	4120.3	8413.5
8605	-10625	4807.69	0.013	1399.9	4807.7
8580	-2656	1201.92	0.017	439.4	1201.9
8555	-2656	1201.92	0.018	205.3	1201.9
8530	0	0.00	0.000	0.0	0.0
8505	0	0.00	0.000	0.0	0.0
8480	0	0.00	0.000	0.0	0.0
8455	0	0.00	0.000	0.0	0.0
8430	0	0.00	0.000	0.0	0.0
8405	0	0.00	0.000	0.0	0.0
8380	0	0.00	0.000	0.0	0.0
8355	0	0.00	0.000	0.0	0.0
8330	0	0.00	0.000	0.0	0.0
8305	0	0.00	0.000	0.0	0.0
8280	0	0.00	0.000	0.0	0.0
8255	0	0.00	0.000	0.0	0.0
8230	0	0.00	0.000	0.0	0.0
8205	0	0.00	0.000	0.0	0.0
8180	0	0.00	0.000	0.0	0.0
8155	0	0.00	0.000	0.0	0.0
8130	0	0.00	0.000	0.0	0.0
8105	0	0.00	0.000	0.0	0.0
Total	585344	834134.62	0.027	478339.1	597153.3

Zeus 80

BENCH	NET_VALUE	NET_TONS	mi_grade	tons_mineral	tons_waste
8980	0	0.00	0.000	0.0	0.0
8955	0	0.00	0.000	0.0	0.0
8930	0	0.00	0.000	0.0	0.0
8905	0	0.00	0.000	0.0	0.0
8880	0	0.00	0.000	0.0	0.0
8855	0	0.00	0.000	0.0	0.0
8830	0	0.00	0.000	0.0	0.0
8805	0	0.00	0.000	0.0	0.0
8780	0	0.00	0.000	0.0	0.0
8755	0	0.00	0.000	0.0	0.0
8730	0	0.00	0.000	0.0	0.0
8705	0	0.00	0.000	0.0	0.0
8680	0	0.00	0.000	0.0	0.0
8655	0	0.00	0.000	0.0	0.0
8630	0	0.00	0.000	0.0	0.0
8605	0	0.00	0.000	0.0	0.0
8580	0	0.00	0.000	0.0	0.0
8555	0	0.00	0.000	0.0	0.0
8530	0	0.00	0.000	0.0	0.0
8505	0	0.00	0.000	0.0	0.0
8480	0	0.00	0.000	0.0	0.0
8455	0	0.00	0.000	0.0	0.0
8430	0	0.00	0.000	0.0	0.0
8405	0	0.00	0.000	0.0	0.0
8380	0	0.00	0.000	0.0	0.0
8355	0	0.00	0.000	0.0	0.0
8330	0	0.00	0.000	0.0	0.0
8305	0	0.00	0.000	0.0	0.0
8280	0	0.00	0.000	0.0	0.0
8255	0	0.00	0.000	0.0	0.0
8230	0	0.00	0.000	0.0	0.0
8205	0	0.00	0.000	0.0	0.0
8180	0	0.00	0.000	0.0	0.0
8155	0	0.00	0.000	0.0	0.0
8130	0	0.00	0.000	0.0	0.0
8105	0	0.00	0.000	0.0	0.0
Total	0	0.00	0.000	0.0	0.0

APPENDIX 24. MAXIMUM EXTENT OF MINERALIZATION FROM GALACTIC RECORDS

See Spreadsheet file APPENDIX24.xls

APPENDIX 24: ESTIMATE OF MINERALIZATION ON EACH CLAIM FROM GALACTIC RECORDS										
CLAIMS WITHIN OPEN PIT									Acre Factor	0.0207
	Mineral	Acre	Acres	Total	OWNER INTEREST				Acre	Acres
CLAIM	Survey	Factor	In	Acres	CAIN	BCMC	LCBMC		Factor	Out
	Number	In	Pit	in claim		Galactic	Miller		Out	Pit
Argentine	955		2.20	2.20	2.20					
Arthur	Unpatented	12	0.25	4.6		0.25				0.00
Belvedere	Unpatented	369	7.64	7.6	7.64					0.00
Blue Point	Unpatented	477	9.87	18.8		9.87			381	7.89
Bullion	428		20.66	20.66	20.66					
Central Lode	1510	102	2.11	2.22	2.11				11	0.23
Consolidated Pacific	Unpatented	274	5.67	8.31		5.67			118	2.44
Coupon	2247	191	3.95	10.84	3.95					0.00
Eva	3698	17	0.35	18.67			0.35		840	17.39
Georgia	Unpatented		8.80	8.80	8.80					
Hobart	2257	77	1.59	17.54	1.59				654	13.54
Homestake	953		0.58	0.58	0.58					
Lucky Jack	1902	248	5.13	16.03	5.13					0.00
Oceola	3698	444	9.19	20.66			9.19		546	11.30
Ohio Lode	955		2.47	2.47	2.47					
Pennsylvania	955		2.35	2.35	2.35					
Ralston #2	953	6	0.12	2.11	0.12					0.00
Ralston North	953		2.00	2.00	2.00					
Red Lyon	651		9.70	9.70	9.70					
San Francisco	1510		2.41	2.41	2.41					
Sitting Bull	955	69	1.43	2.24	1.43				36	0.75
Stonewall	953		0.58	0.58	0.58					
Texas	Unpatented		8.40	8.40	8.40					
Tioga	556	554	11.47	20.66			11.47		419	8.67
Tioga South	961		1.07	1.07	1.07					
Transit	Unpatented		0.06	0.06	0.06					
Union Pacific	Unpatented	99	2.05	7.3		2.05			268	5.55
Vindicator	Unpatented	386	7.99	17.1	7.99				442	9.15
West Bullion	428		14.77	14.77	14.77					
Whitney	4464	452	9.36	20.47			9.36		526	10.89
Zeus 96	Unpatented	2	0.04	12.3	0.04					0.00
BURGESS GROUP	Patented	345	7.14	66.96	7.14					0.00
Burgess	1271			3.44						
Bruce	1230			1.99						
Granger	1231			0.58						
Gilda Lode	1928			2.62						
Edith Lode	1234			2.59						
Bodie Lode	1235			2.56						
Molly Lode	1233			3.41						
			Pit		Cain	Galactic	Miller			
TOTALS		Acres	161.42		113.2[illegible]	17.84	30.37			
		Percent	100.%		70.1%	11.1%	18.8%			

APPENDIX 24: ESTIMATE OF MINERALIZATION ON EACH CLAIM FROM GALACTIC RECORDS										
TONNAGE ESTIMATION				901.31	Planimeter conversion factor					
	THICKNESS		Planimetor	Square	Density	Tons				
BLOCK	RANGE	AVERAGE	Reading	Feet	160 lbs					
	FEET	DEPTH			cu. ft					
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A	0-100	50	175	7,886,435	160	630,915				
Lost Carcass	100-200	150	241	32,582,244	160	2,606,580				
Private	200-300	250	270	60,838,215	160	4,867,057				
	300-400	350	218	68,769,716	160	5,501,577				
	400-500	450	630	255,520,505	160	20,441,640				
	500-600	550	0	0	160	0				
	600-700	650	0	0	160	0				
	700-750	725	0	0	160	0				
	Subtotal			425,597,116		34,047,769	Miller	Private		
B	0-100	50	154	6,940,063	160	555,205				
J.S. Cain	100-200	150	153	20,684,993	160	1,654,799				
Private	200-300	250	107	24,109,959	160	1,928,797				
	300-400	350	90	28,391,167	160	2,271,293				
	400-500	450	292	118,431,726	160	9,474,538				
	500-600	550	490	242,902,208	160	19,432,177				
	600-700	650	0	0	160	0				
	700-750	725	0	0	160	0				
	Subtotal			441,460,117		35,316,809	Cain	Private		
C	0-100	50	168	7,570,978	160	605,678				
Bodie Consolidated	100-200	150	135	18,251,465	160	1,460,117				
BLM	200-300	250	74	16,674,178	160	1,333,934				
	300-400	350	85	26,813,880	160	2,145,110				
	400-500	450	25	10,139,703	160	811,176				
	500-600	550	8	3,965,750	160	317,260				
	600-700	650	0	0	160	0				
	700-750	725	0	0	160	0				
	Subtotal			83,415,953		6,673,276	Galactic	BLM		

APPENDIX 24: ESTIMATE OF MINERALIZATION ON EACH CLAIM FROM GALACTIC RECORDS										
D	0-100	50	102	4,596,665	160	367,733				
J.S. Cain	100-200	150	97	13,114,015	160	1,049,121				
BLM	200-300	250	111	25,011,266	160	2,000,901				
	300-400	350	101	31,861,199	160	2,548,896				
	400-500	450	96	38,936,458	160	3,114,917				
	500-600	550	66	32,717,440	160	2,617,395				
	600-700	650	108	63,271,744	160	5,061,740				
	700-750	725	110	71,879,225	160	5,750,338				
	750-750	750	7	4,731,861	160	378,549				
	Subtotal			281,388,013		22,889,590	Cain	BLM		
E	0-100	50	17	766,111	160	61,289				
Bodie Consolidated	100-200	150	50	6,759,802	160	540,784				
BLM	200-300	250	70	15,772,871	160	1,261,830				
	300-400	350	43	13,564,669	160	1,085,174				
	400-500	450	60	24,335,286	160	1,946,823				
	500-600	550	45	22,307,346	160	1,784,588				
	600-700	650	55	32,221,721	160	2,577,738				
	700-750	725	28	18,296,530	160	1,463,722				
	750-750	750	9	6,083,822	160	486,706				
	Subtotal			134,024,335		11,208,653	Galactic	BLM		
F	0-100	50	51	2,298,333	160	183,867				
J.S. Cain	100-200	150	35	4,731,861	160	378,549				
BLM	200-300	250	23	5,182,515	160	414,601				
	300-400	350	31	9,779,180	160	782,334				
	400-500	450	25	10,139,703	160	811,176				
	500-600	550	21	10,410,095	160	832,808				
	600-700	650	42	24,605,678	160	1,968,454				
	700-750	725	25	16,336,187	160	1,306,895				
	750-750	750	0	0	160	0				
	Subtotal			83,483,551		6,678,684	Cain	BLM		
G	0-100	50	314	14,150,518	160	1,132,041				
J.S. Cain	100-200	150	245	33,123,028	160	2,649,842				
Private	200-300	250	143	32,221,721	160	2,577,738				
	300-400	350	182	57,413,249	160	4,593,060				
	400-500	450	281	113,970,257	160	9,117,621				
	500-600	550	370	183,415,953	160	14,673,276				
	600-700	650	898	526,092,835	160	42,087,427				
	700-750	725	605	395,335,737	160	31,626,859				
	750-750	750	0	0	160	0				
	Subtotal			1,355,723,299		108,457,864	Cain	Private		

APPENDIX 24: ESTIMATE OF MINERALIZATION ON EACH CLAIM FROM GALACTIC RECORDS										
H	0-100	50	10	450,653	160	36,052				
J.S. Cain	100-200	150	38	5,137,449	160	410,996				
BLM	200-300	250	60	13,519,603	160	1,081,568				
	300-400	350	68	21,451,104	160	1,716,088				
	400-500	450	55	22,307,346	160	1,784,588				
	500-600	550	86	42,631,816	160	3,410,545				
	600-700	650	53	31,050,023	160	2,484,002				
	700-750	725	16	10,455,160	160	836,413				
	750-750	750	0	0	160	0				
	Subtotal			147,003,155		11,760,252	Cain	BLM		
I	0-100	50	15	675,980	160	54,078				
Bodie Consolidated	100-200	150	0	0	160	0				
BLM	200-300	250	0	0	160	0				
	300-400	350	0	0	160	0				
	400-500	450	0	0	160	0				
	500-600	550	0	0	160	0				
	600-700	650	0	0	160	0				
	700-750	725	0	0	160	0				
	750-750	750	0	0	160	0				
	Subtotal			675,980		54,078	Galactic	BLM		
	TONS			TONS						
Total in Pit	237,086,976	100.0%								
	237,086,976									
CAIN	185,103,200	78.1%		BLM	59,264,534	25.0%				
MILLER	34,047,769	14.4%		PRIVATE	177,822,443	75.0%				
GALACTIC	17,936,007	7.6%								
Ore Reserves	40000000									
Stripping Ratio	5.9									
CONSTRAINED PIT MODEL		% DECREASE	TONS	%						
	CAIN	20	148,082,560	79.6%						
	MILLER	15	28,940,604	15.6%						
	BODIE	50	8,968,004	4.8%						
	TOTAL	20	185,991,167	100.0%						

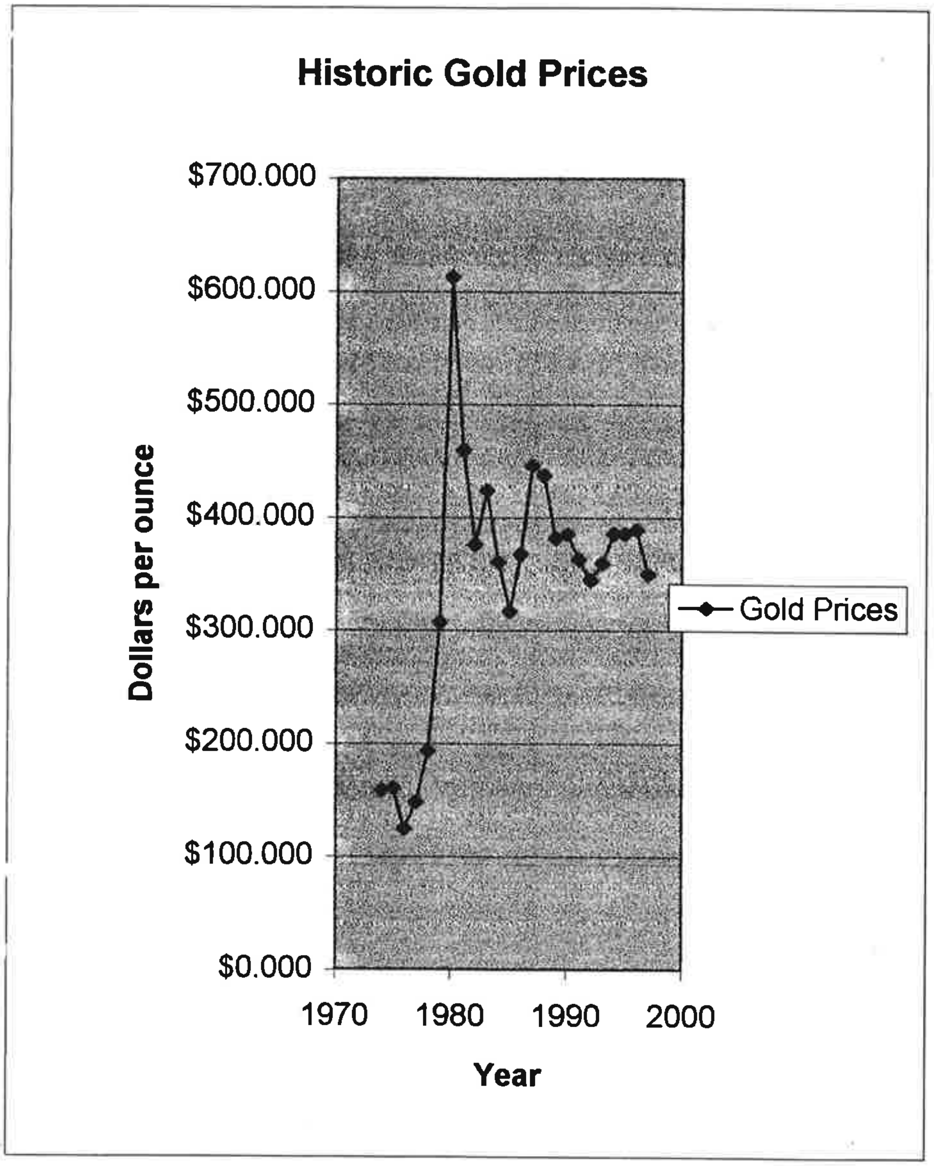
APPENDIX 25. HISTORIC GOLD PRICES

See Spreadsheet file APPENDIX25.xls

APPENDIX 25: HISTORIC GOLD PRICES

From Mining Cost Service, 1997, pages CI-7 and CI-8

Year	Gold Price U.S.
1970	$35.900
1971	$40.800
1972	$58.100
1973	$97.200
1974	$159.100
1975	$161.100
1976	$125.320
1977	$148.310
1978	$193.550
1979	$307.500
1980	$612.560
1981	$459.640
1982	$375.910
1983	$424.180
1984	$360.660
1985	$317.265
1986	$367.510
1987	$446.470
1988	$437.047
1989	$381.580
1990	$384.930
1991	$363.290
1992	$344.970
1993	$359.769
1994	$385.415
1995	$385.500
1996	$389.087
1997	$350.000



APPENDIX 25: HISTORIC GOLD PRICES

From Mining Cost Service, 1997, pages CI-7 and CI-8

Year	Gold Price U.S.
1930	$20.670
1931	$20.670
1932	$20.670
1933	$26.340
1934	$34.700
1935	$34.800
1936	$34.870
1937	$34.800
1938	$34.860
1939	$34.420
1940	$33.850
1941	$33.850
1942	$33.850
1943	$33.850
1944	$33.850
1945	$34.710
1946	$34.710
1947	$34.710
1948	$34.710
1949	$31.700
1950	$34.720
1951	$34.720
1952	$34.600
1953	$34.840
1954	$35.040
1955	$35.030
1956	$34.990
1957	$34.950
1958	$35.100
1959	$35.090
1960	$35.270
1961	$35.170
1962	$35.110
1963	$35.080
1964	$35.100
1965	$35.130
1966	$35.160
1967	$35.200
1968	$38.600
1969	$41.100

APPENDIX 26: LABOR ESCALATION RATES

See Spreadsheet file APPENDIX26.xls

APPENDIX 26: LABOR ESCALATION RATES					
YEAR	MINE LABOR	LABOR			
	INDEX (**)	INDEX			
		(% CHANGE)			
1985	11.98				
1986	12.46	3.9%			
1987	12.54	0.6%			
1988	12.80	2.0%			
1989	13.26	3.5%			
1990	13.69	3.1%			
1991	14.18	3.5%			
1992	14.54	2.5%			
1993	14.60	0.4%			
1994	14.89	1.9%			
1995	15.27	2.5%			
	Average index value for 1986 through 1995:				2.39%
(**)	Mining and milling cost indexes; Mine Labor, WME, page CI 3.				

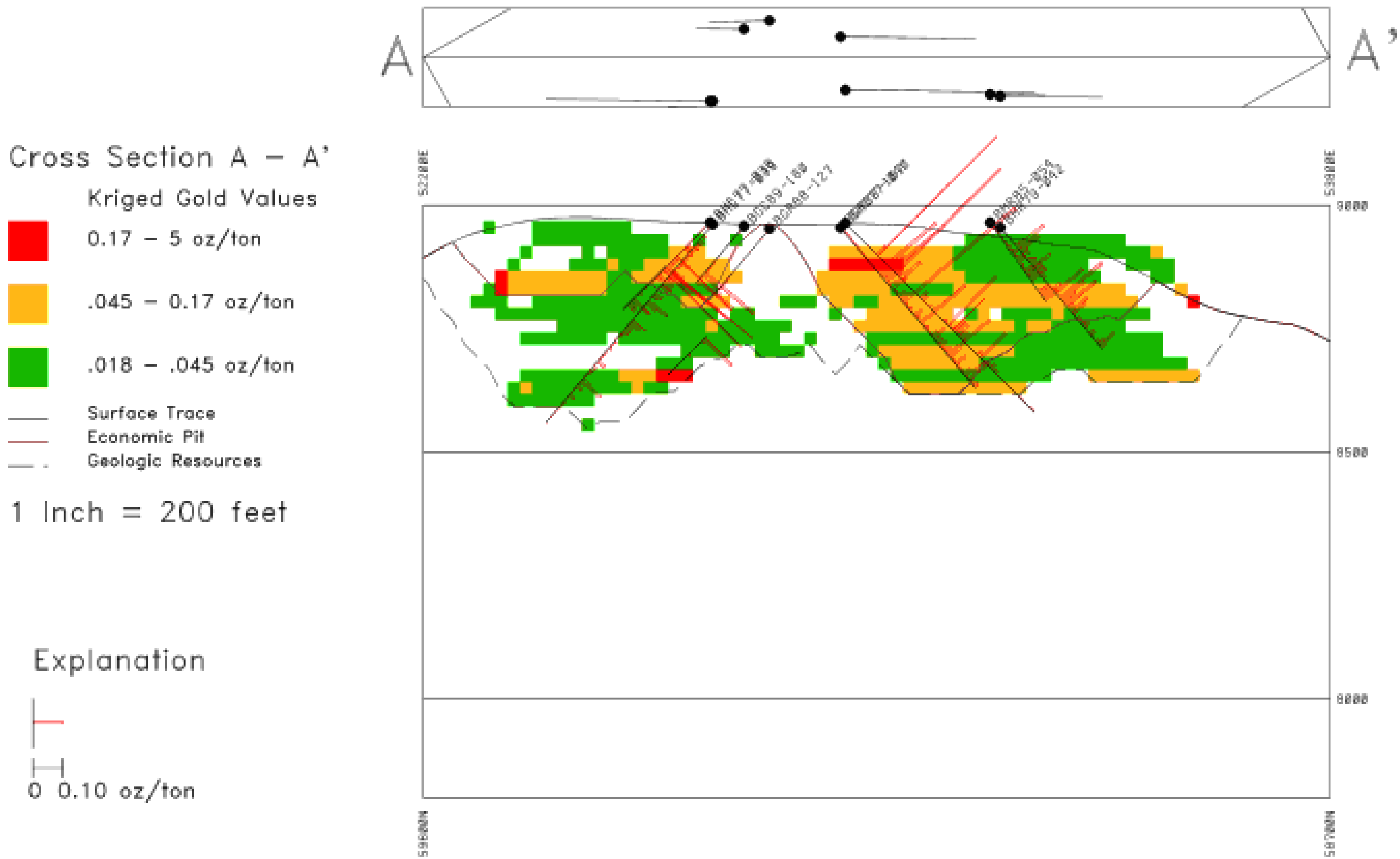
APPENDIX 26: LABOR ESCALATION RATES

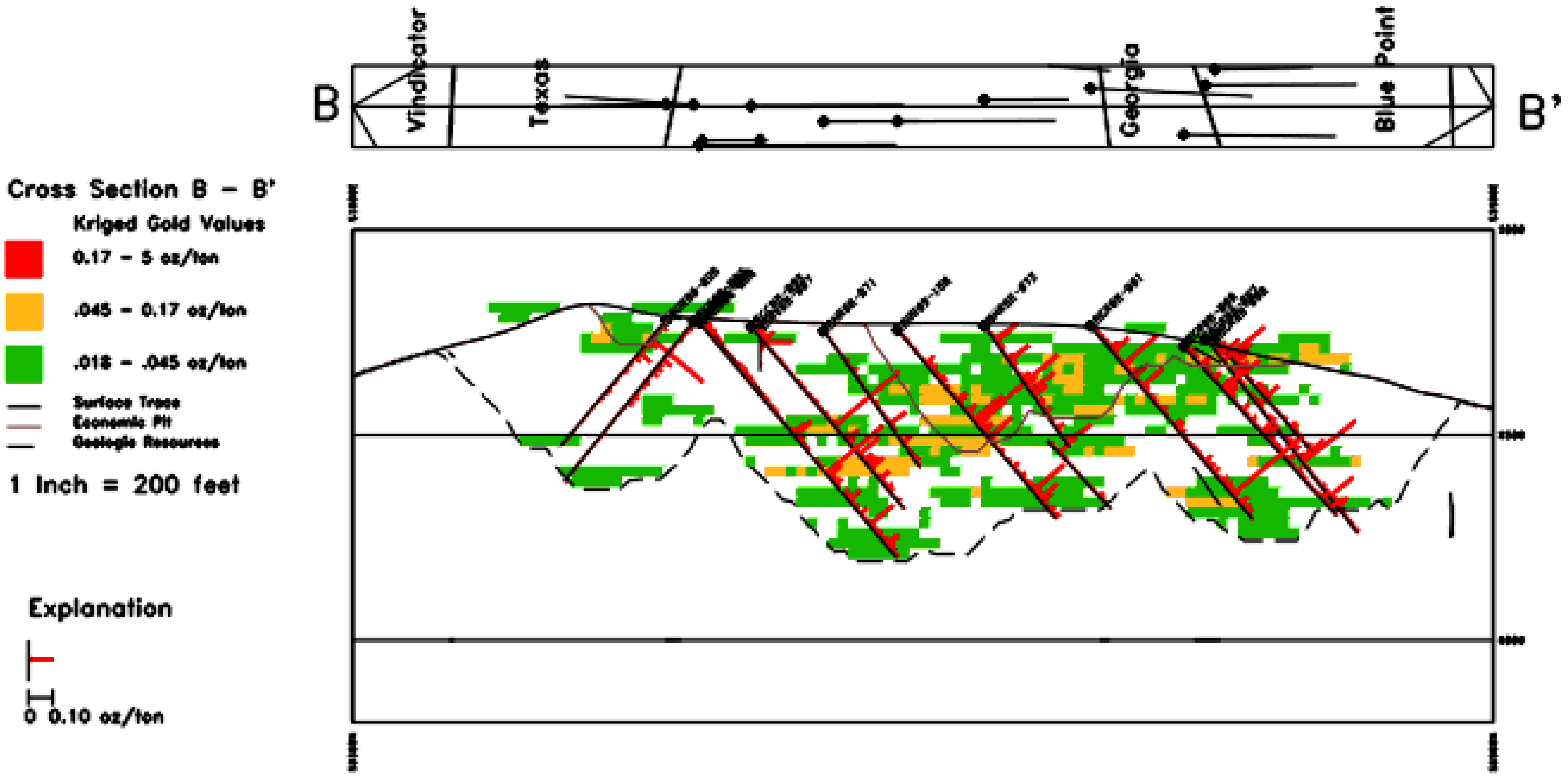
YEAR	WAGES (*)	LABOR INDEX (% CHANGE)
1985	$13.45	
1986	$13.47	0.1%
1987	$13.07	-3.1%
1988	$13.23	1.2%
1989	$13.70	3.4%
1990	$14.29	4.1%
1991	$15.09	5.3%
1992	$15.38	1.9%
1993	$15.09	-1.9%
1994	$16.03	5.9%
1995	$16.72	4.1%
1996	$15.54	-7.6%
1997	$17.71	12.3%
1998		

Average index value for 1986 through 1995: 2.11%

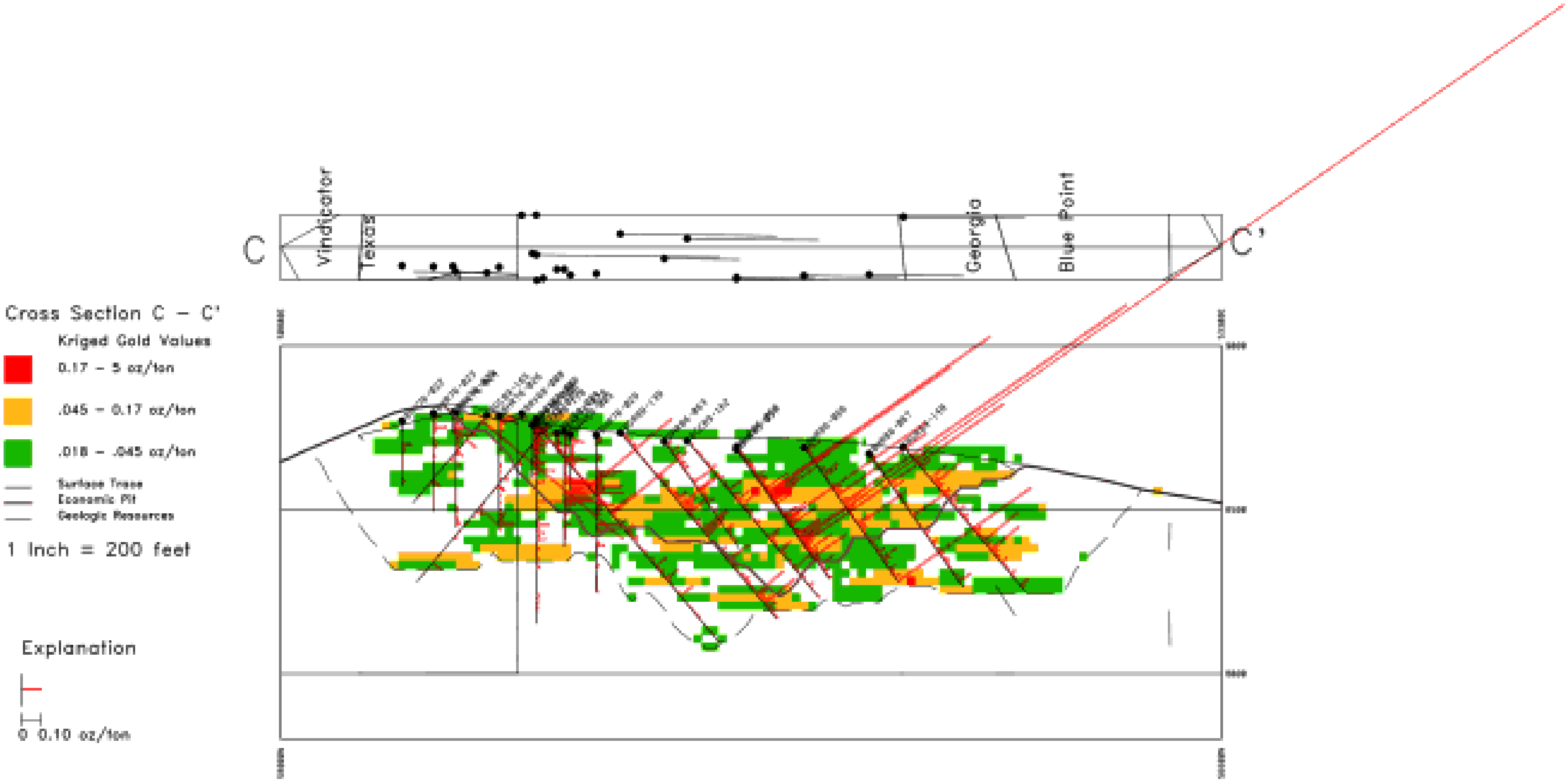
(*) Average earnings of production or nonsupervisory worker's on private nonfarm parolls for metal mining (Monthly Labor Review, Department of Labor; Industry Code 10)

Cross Sections

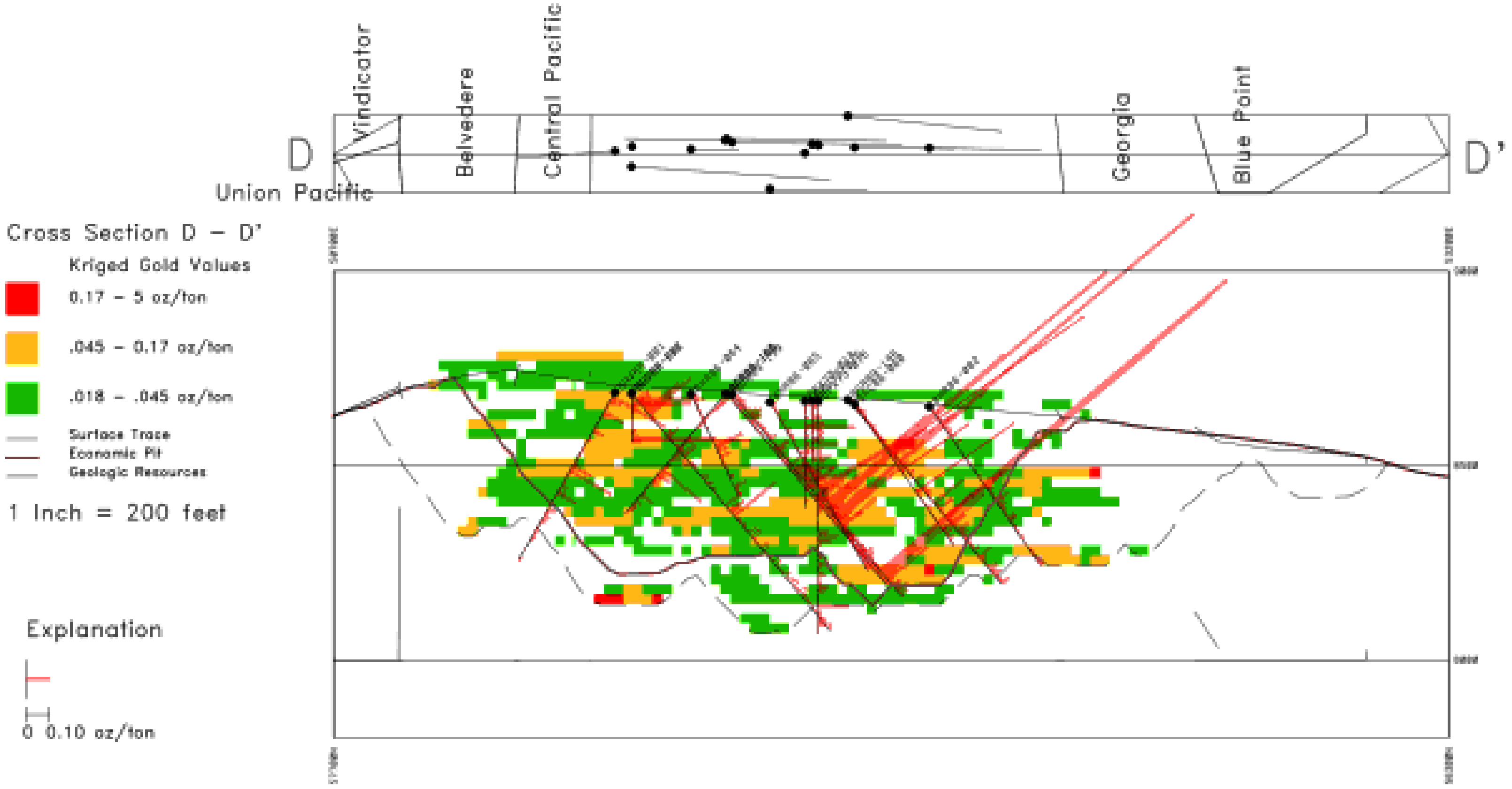

A
A'
Cross Section A – A'
Kriged Gold Values
0.17 – 5 oz/ton
.045 – 0.17 oz/ton
.018 – .045 oz/ton
Surface Trace
Economic Pit
Geologic Resources
1 Inch = 200 feet
Explanation
0 0.10 oz/ton
8500



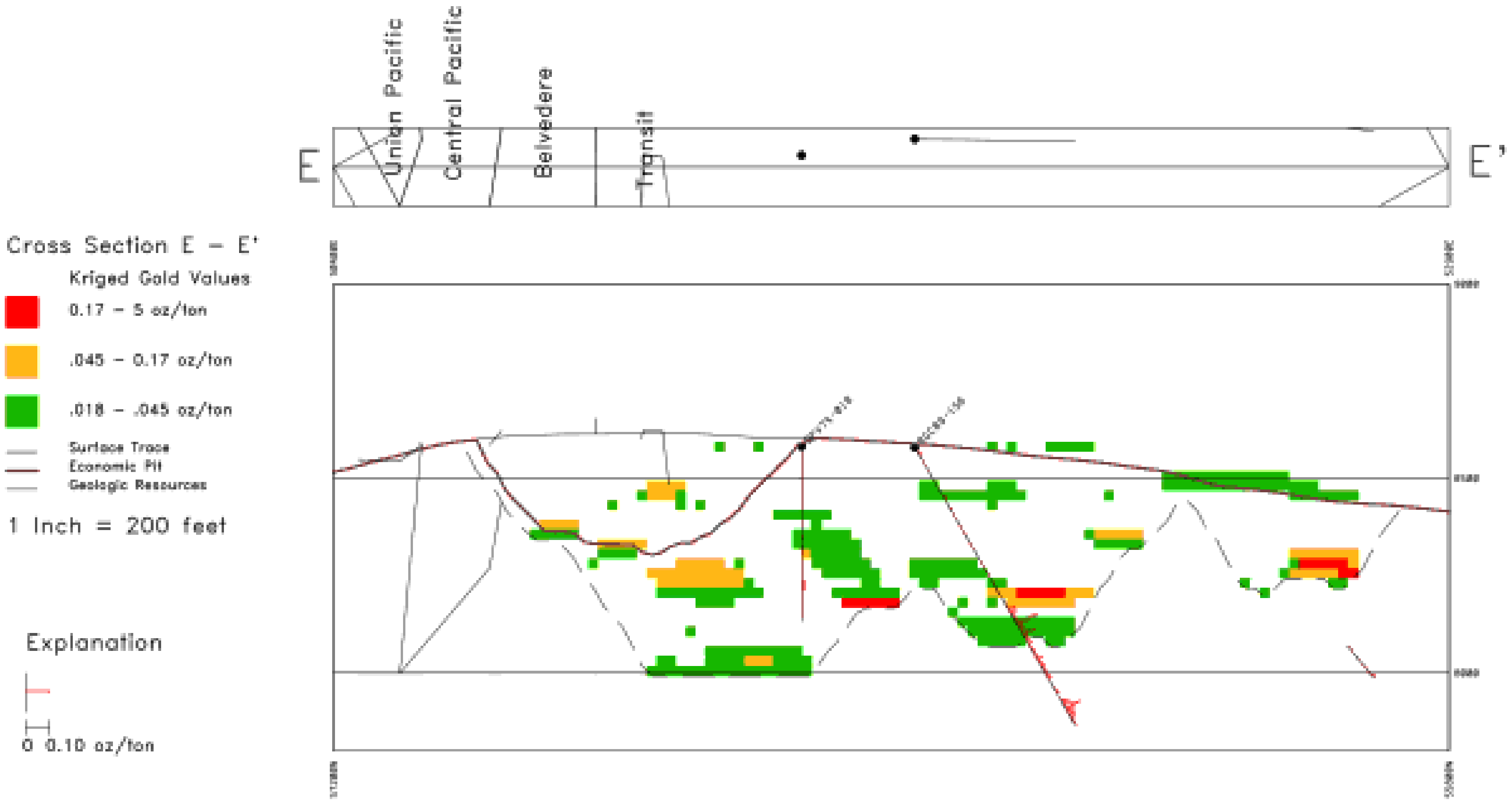
B
B'
Vindicator
Texas
Georgia
Blue Point
Cross Section B – B'
Kriged Gold Values
0.17 – 5 oz/ton
.045 – 0.17 oz/ton
.018 – .045 oz/ton
Surface Trace
Economic Pit
Geologic Resources
1 Inch = 200 feet
Explanation
0 0.10 oz/ton



Cross Section C – C'
Kriged Gold Values
0.17 – 5 oz/ton
.045 – 0.17 oz/ton
.018 – .045 oz/ton
Surface Trace
Economic Pit
Geologic Resources
1 Inch = 200 feet
Explanation
0 0.10 oz/ton
C
C'
Vindicator
Texas
Georgia
Blue Point



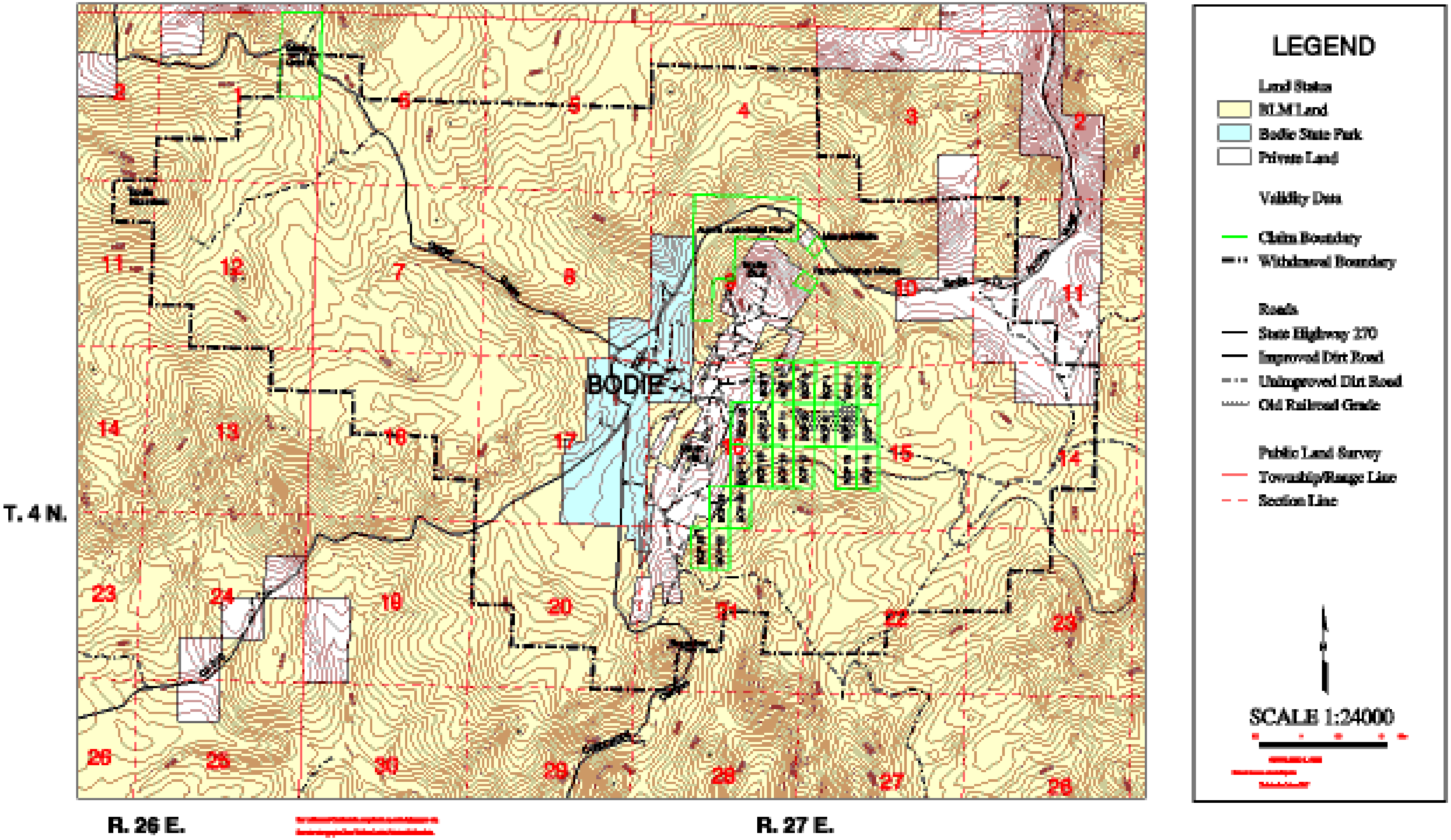
Vindicator
Belvedere
Central Pacific
Georgia
Blue Point
D
D'
Union Pacific
Cross Section D - D'
Kriged Gold Values
0.17 - 5 oz/ton
.045 - 0.17 oz/ton
.018 - .045 oz/ton
Surface Trace
Economic Pit
Geologic Resources
1 Inch = 200 feet
Explanation
0 0.10 oz/ton



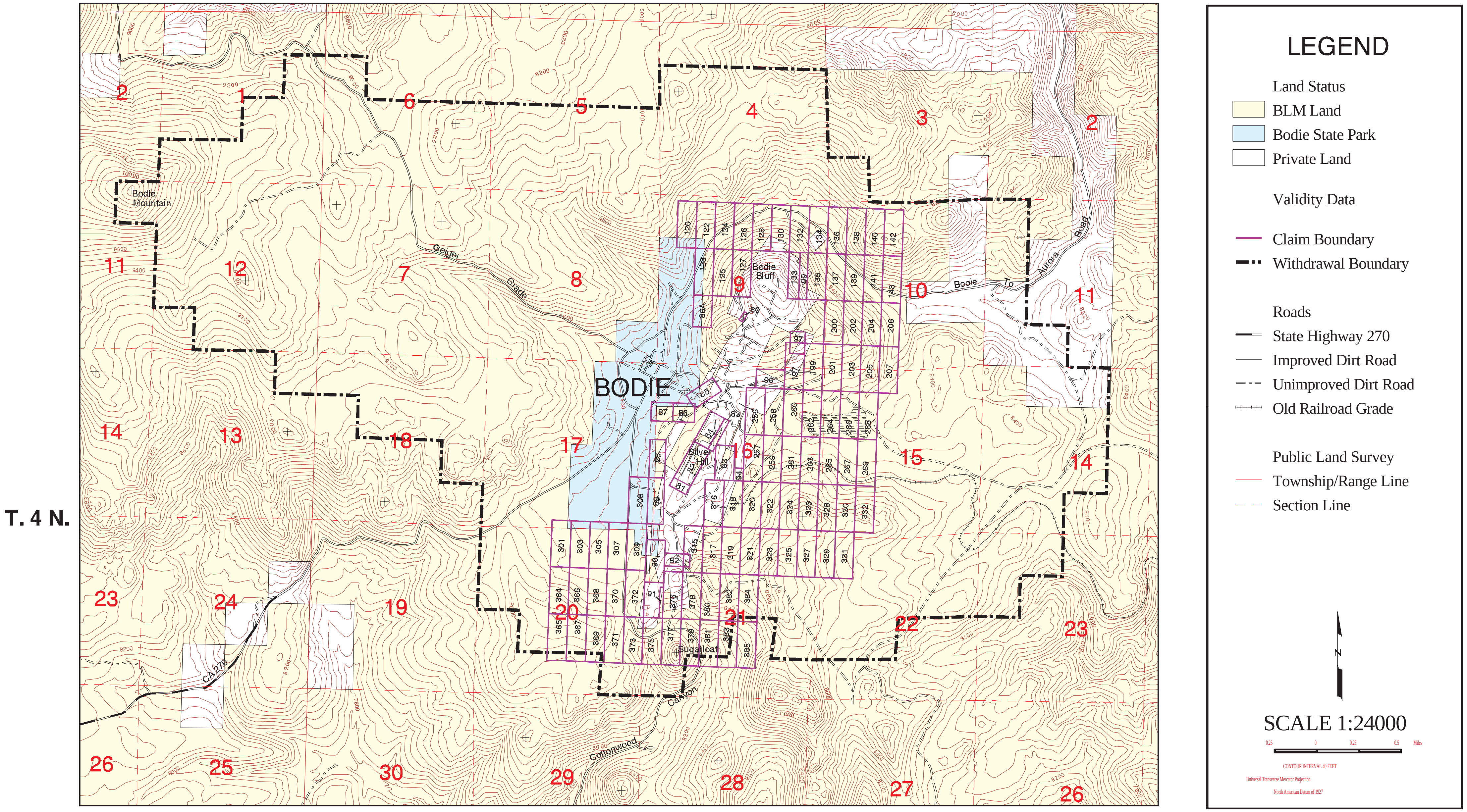
Union Pacific
Central Pacific
Belvedere
Transit
E
E'
Cross Section E – E'
Kriged Gold Values
0.17 – 5 oz/ton
.045 – 0.17 oz/ton
.018 – .045 oz/ton
Surface Trace
Economic Pit
Geologic Resources
1 Inch = 200 feet
Explanation
0 0.10 oz/ton

Maps

MAP 1 - Millsite and Placer Claims



MAP 2 - Zeus Claim Block



R. 26 E.

Note: Land Status and Claim Boundaries portrayed on this map are for display purposes only.

Please refer to the appropriate Master Title Plat or Location Notice for official boundaries.

R. 27 E.

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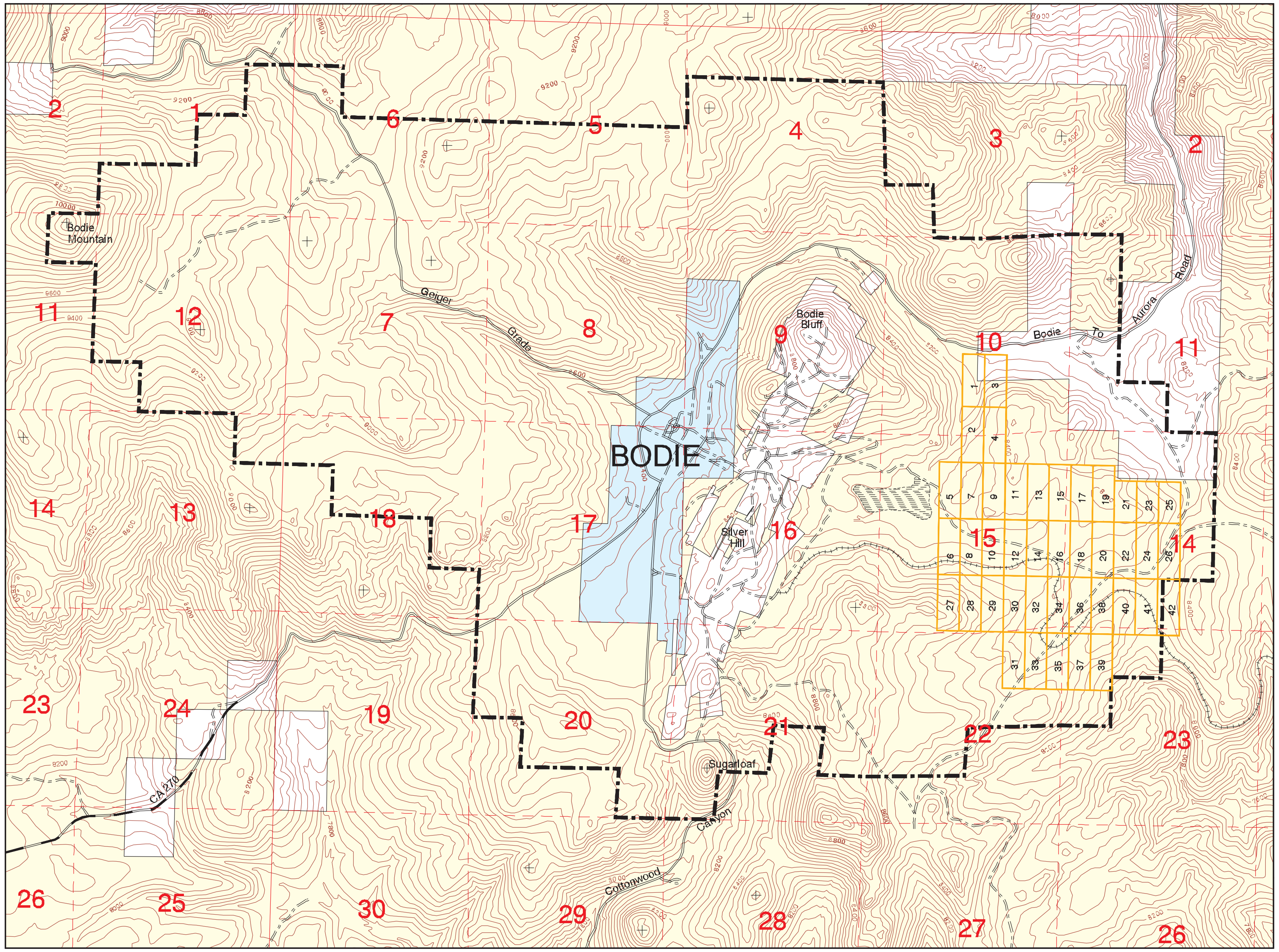
U.S. Department of the Interior
Bureau of Land Management
Bishop Resource Area
Geographic Sciences
April 1997

MAP 3 - NLM Claim Block



T. 4 N.

R. 26 E.

R. 27 E.

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Bishop Resource Area
Geographic Sciences
April 1997

LEGEND

Land Status
- BLM Land
- Bodie State Park
- Private Land

Validity Data
- Claim Boundary
- Withdrawal Boundary

Roads
- State Highway 270
- Improved Dirt Road
- Unimproved Dirt Road
- Old Railroad Grade

Public Land Survey
- Township/Range Line
- Section Line

N

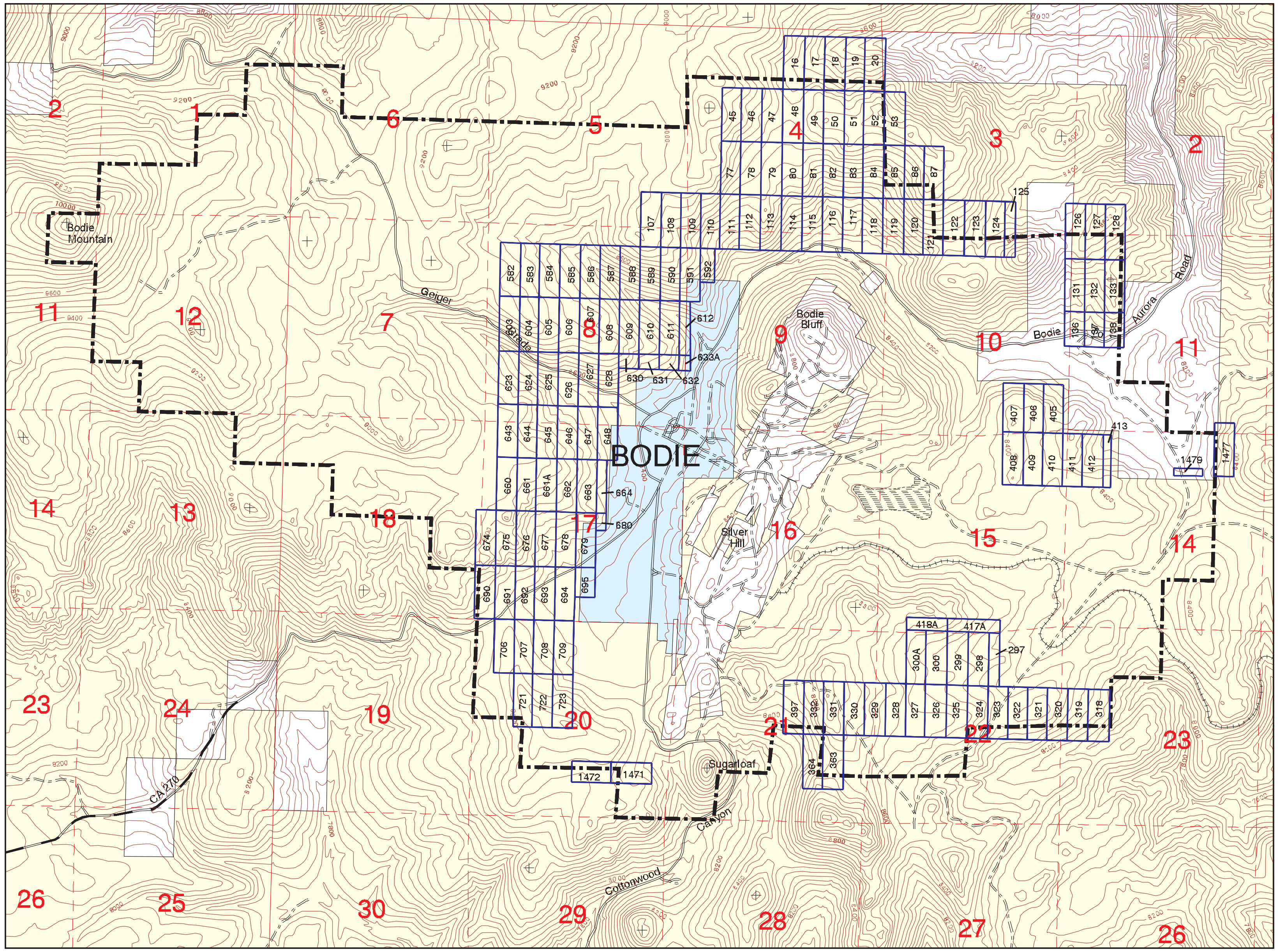
SCALE 1:24000

0.25 0 0.25 0.5 Miles

CONTOUR INTERVAL 40 FEET
Universal Transverse Mercator Projection
North American Datum of 1927

MAP 4 - GSI Claim Block

T. 4 N.



R. 26 E.

R. 27 E.

Note: Land Status and Claim Boundaries portrayed on this map are for display purposes only.

Please refer to the appropriate Master Title Plat or Location Notice for official boundaries.

LEGEND

Land Status
- BLM Land
- Bodie State Park
- Private Land

Validity Data
- Claim Boundary
- Withdrawal Boundary

Roads
- State Highway 270
- Improved Dirt Road
- Unimproved Dirt Road
- Old Railroad Grade

Public Land Survey
- Township/Range Line
- Section Line

N

SCALE 1:24000

0.25 0 0.25 0.5 Miles

CONTOUR INTERVAL 40 FEET

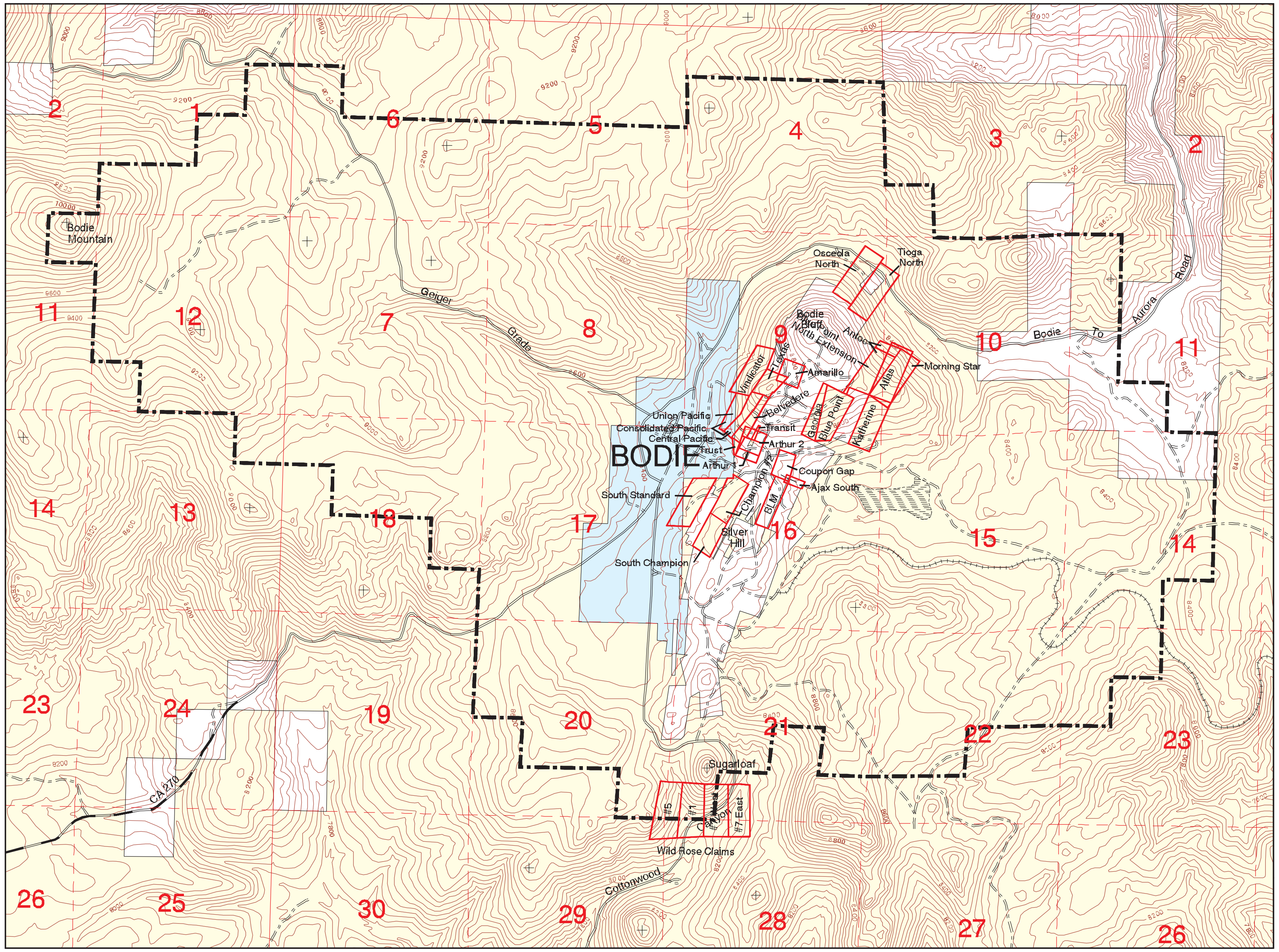
Universal Transverse Mercator Projection

North American Datum of 1927

Produced By:
U.S. Department of the Interior
Bureau of Land Management
Bishop Resource Area
Geographic Sciences
April 1997

MAP 5 - Other Lode Claims

T. 4 N.



R. 26 E.

R. 27 E.

LEGEND

Land Status

- BLM Land
- Bodie State Park
- Private Land

Validity Data

- Claim Boundary
- Withdrawal Boundary

Roads

- State Highway 270
- Improved Dirt Road
- Unimproved Dirt Road
- Old Railroad Grade

Public Land Survey

- Township/Range Line
- Section Line

N

SCALE 1:24000

0.25 0 0.25 0.5 Miles

CONTOUR INTERVAL 40 FEET

Universal Transverse Mercator Projection

North American Datum of 1927

Note: Land Status and Claim Boundaries portrayed on this map are for display purposes only.

Please refer to the appropriate Master Title Plat or Location Notice for official boundaries.

Produced By:

U.S. Department of the Interior

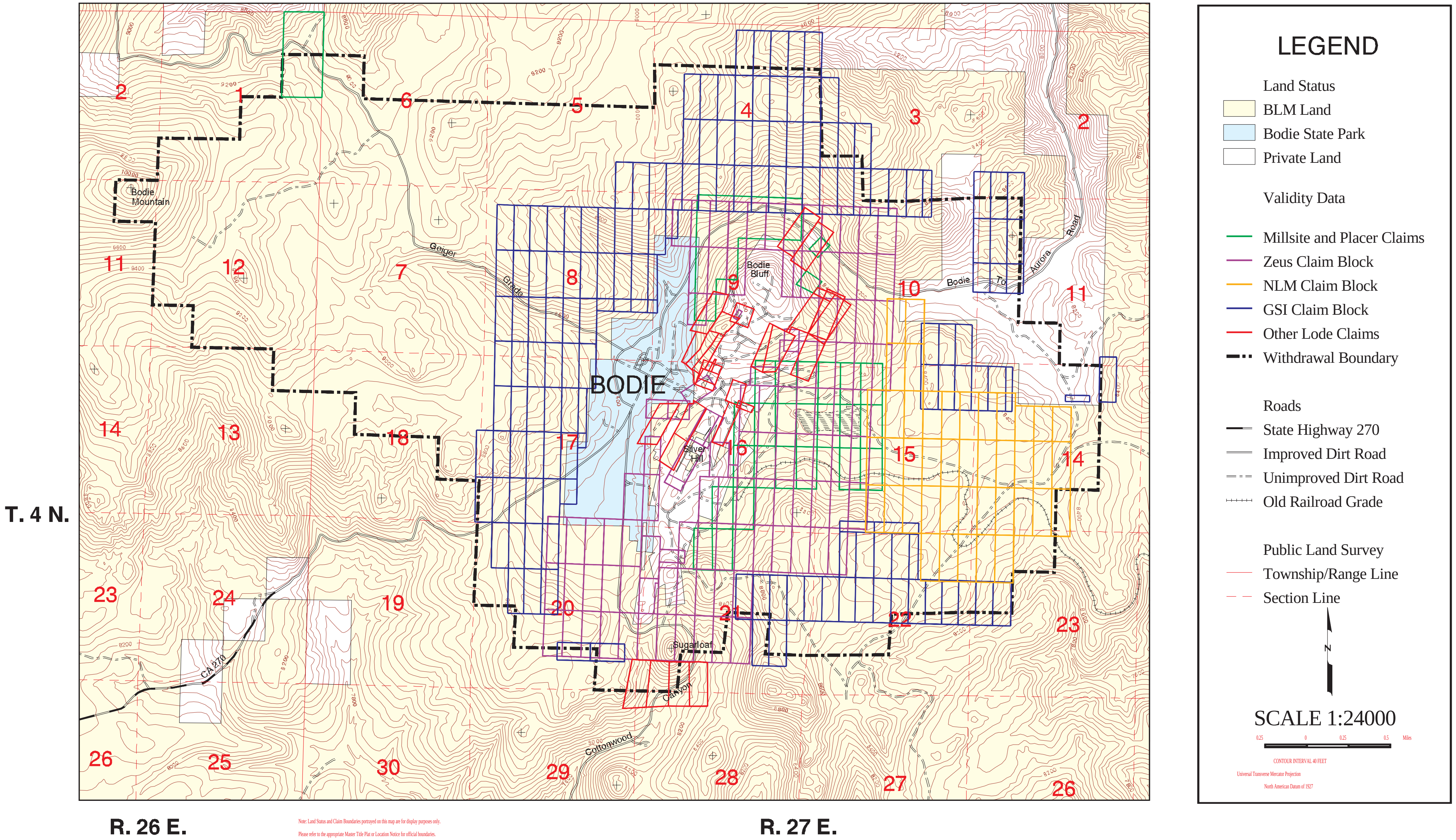
Bureau of Land Management

Bishop Resource Area

Geographic Sciences

April 1997

MAP 6 - Bodie Bowl Composite Claim Map



Note: Land Status and Claim Boundaries portrayed on this map are for display purposes only.
Please refer to the appropriate Master Title Plat or Location Notice for official boundaries.

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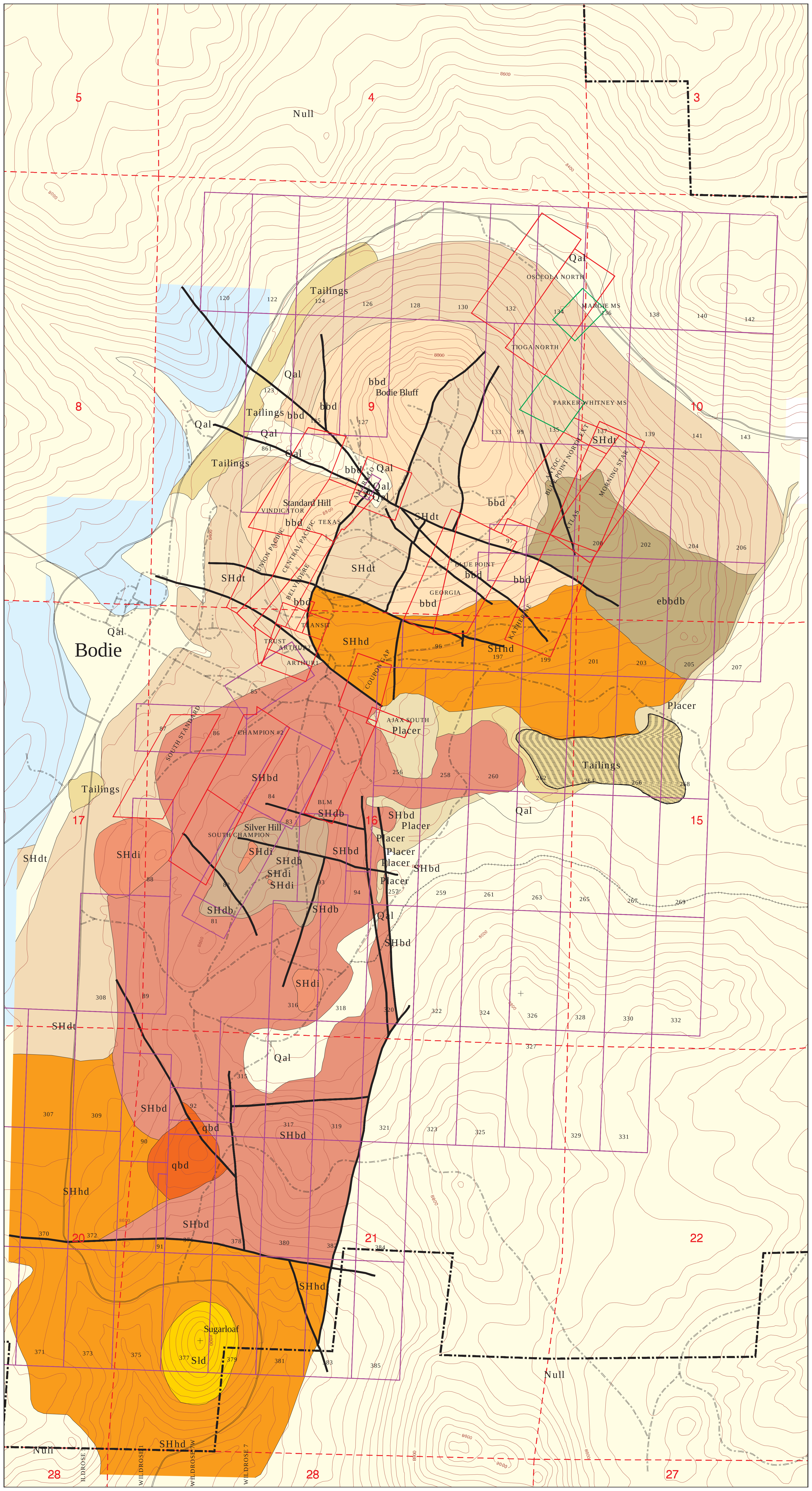
Bureau of Land Management
Bishop Resource Area
Geographic Sciences
April 1997

MAP 7 - Geology (from Nerco and other sources)



T. 4 N.

R. 27 E.

LEGEND

Geology

- Qal Quaternary alluvial deposits
- bbd Bodie Bluff hornblende dacite
- ebbdb East Bodie Bluff dacite breccia
- qbd Queen Bee dacite
- Sld Sugar Loaf dacite
- SHdi Silver Hill dacite intrusive rocks
- SHdt Silver Hill dacite tuff and tuff breccia
- SHhd Silver Hill hornblende dacite
- SHbd Silver Hill biotite dacite
- SHdb Silver Hill dacite breccia
- Tailings
- Placer
- Unclassified
- Fault

Validity Data

- Named Lode Claim Boundary
- Zeus Block Claim Boundary
- Withdrawal Boundary

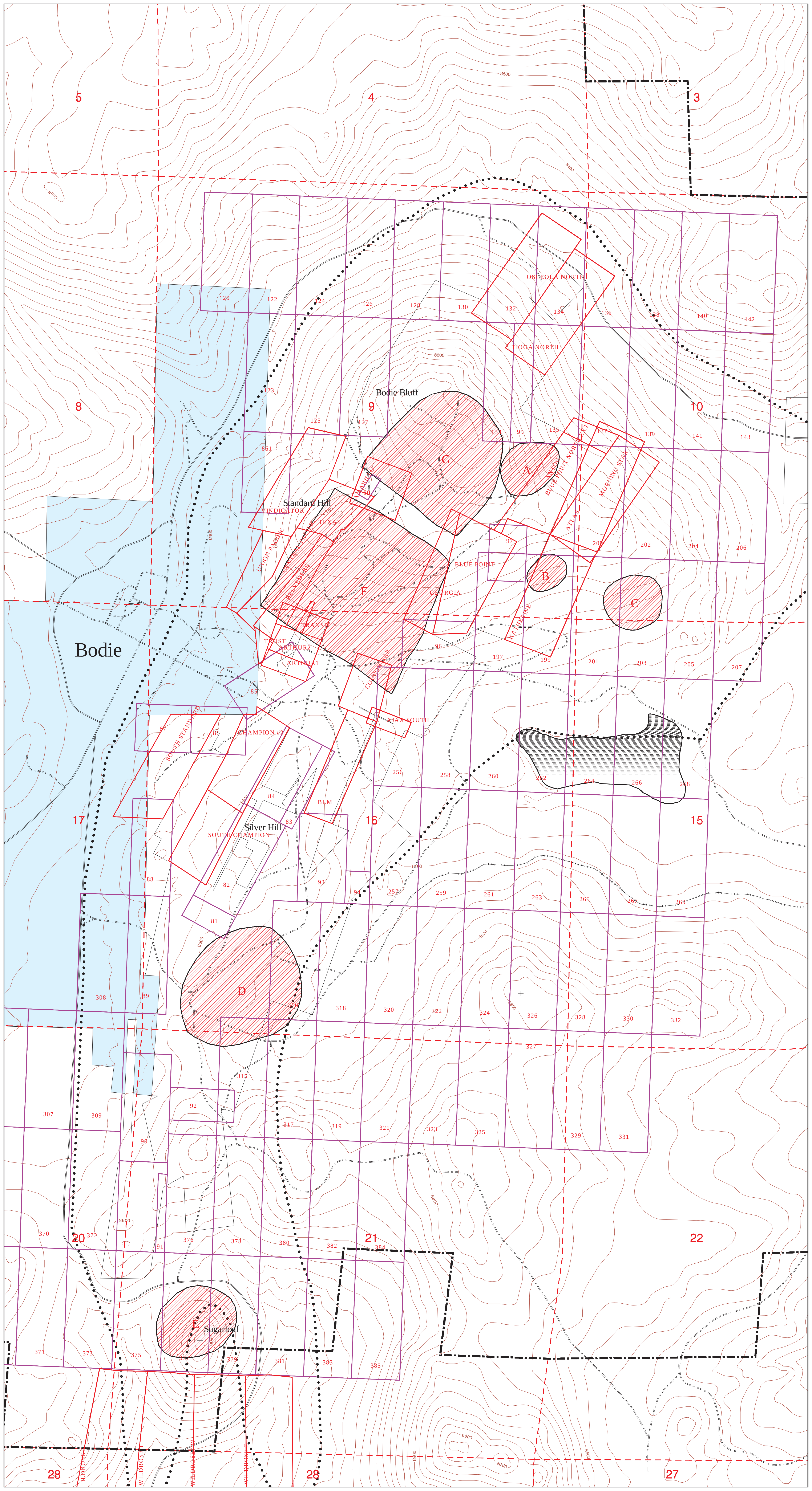
Line Legend

- Improved Dirt Road
- Unimproved Dirt Road
- Old Railroad Grade
- Section Line
- Index Contour
- Intermediate Contour

1 Inch = 500 Feet

MAP 8 - Homestake Gold Targets in the Bodie Bowl

T. 4 N.



R. 27 E.

LEGEND

Land Status
- BLM Land
- Bodie State Park
- Private Land

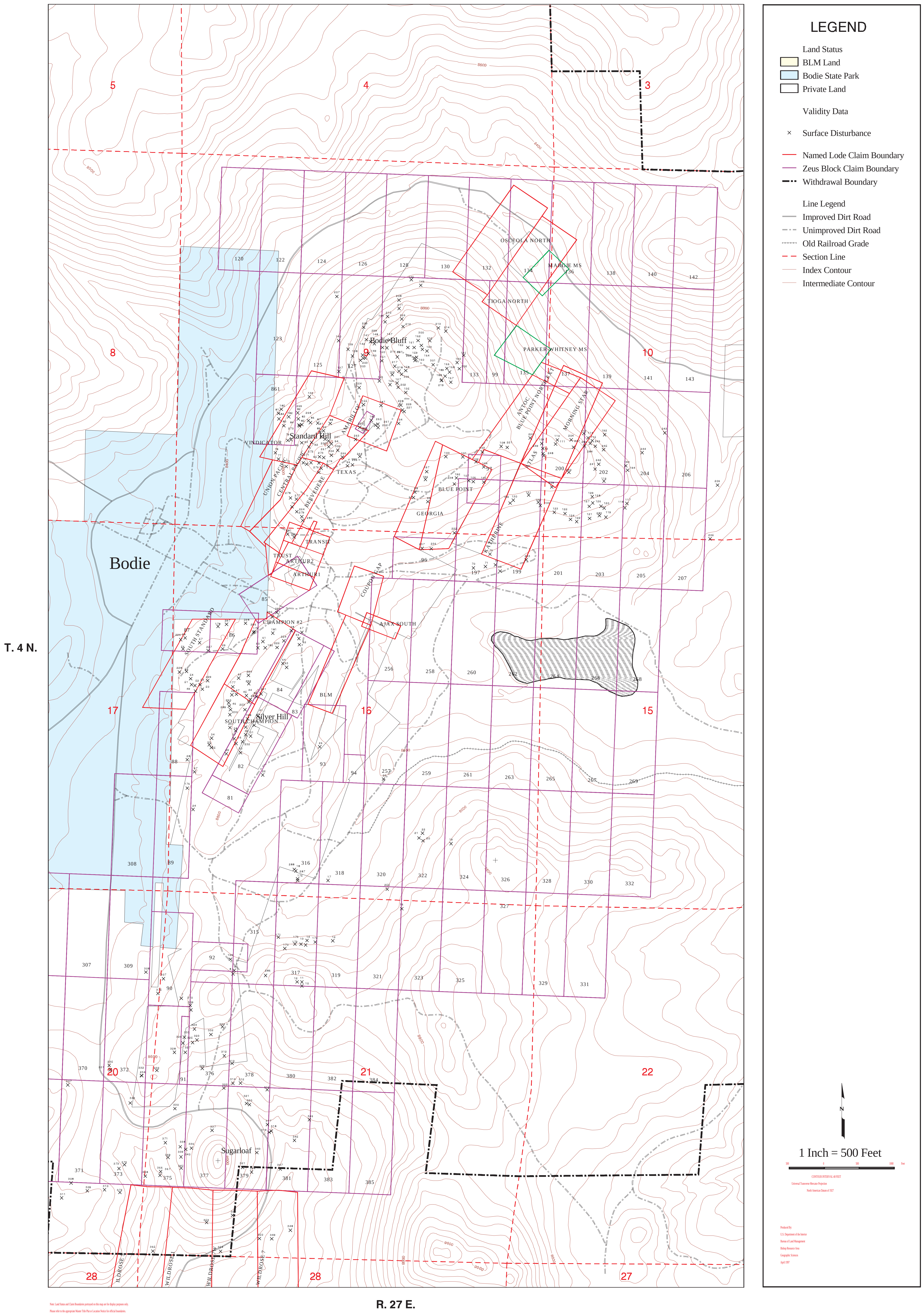
Validity Data
- Homestake Gold Targets
- Named Lode Claim Boundary
- Zeus Block Claim Boundary
- Area of Hydrothermal Alteration (Al-Rawi, 1969)
- Withdrawal Boundary

Line Legend
- Improved Dirt Road
- Unimproved Dirt Road
- Old Railroad Grade
- Section Line
- Index Contour
- Intermediate Contour

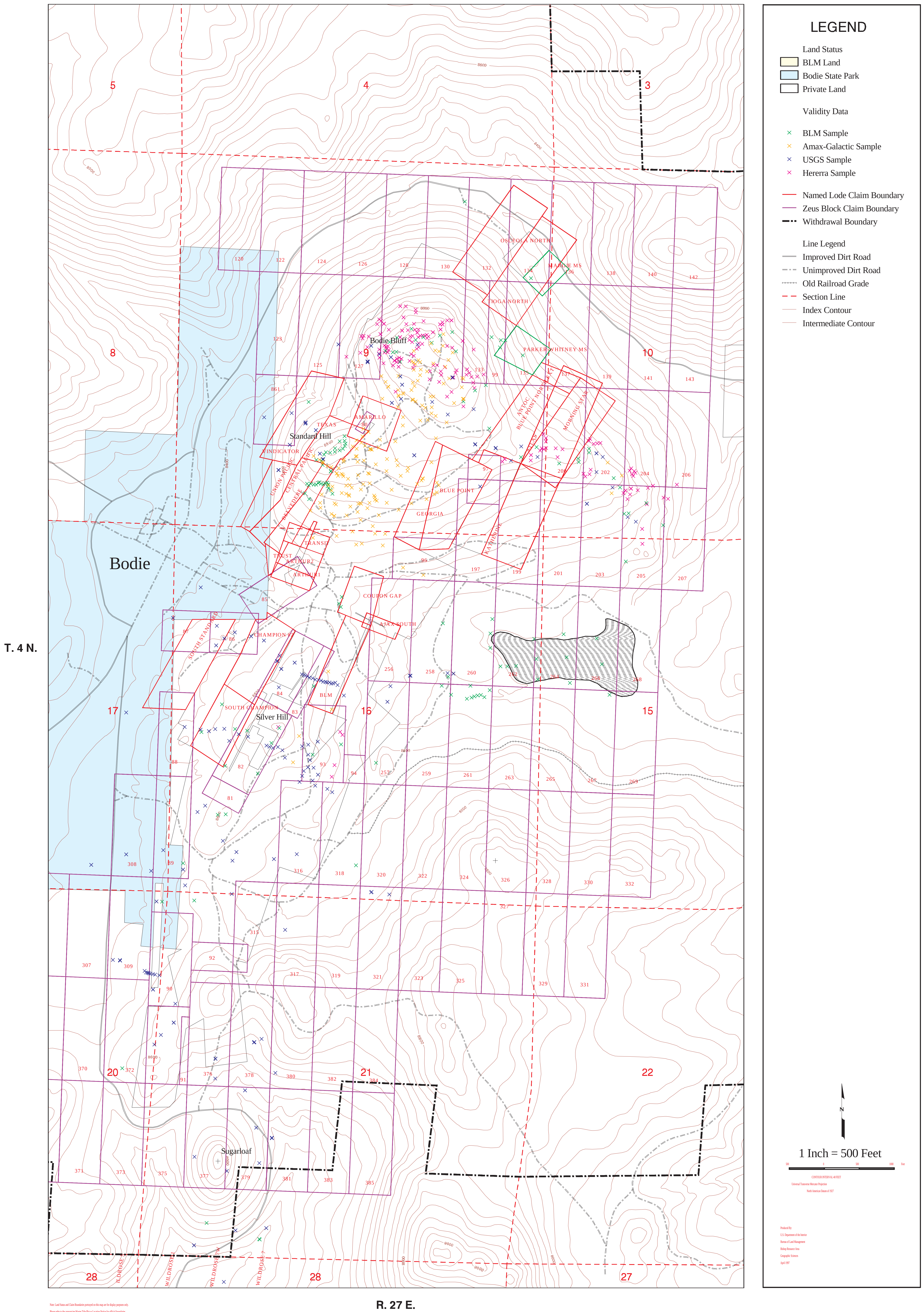
N

1 Inch = 500 Feet

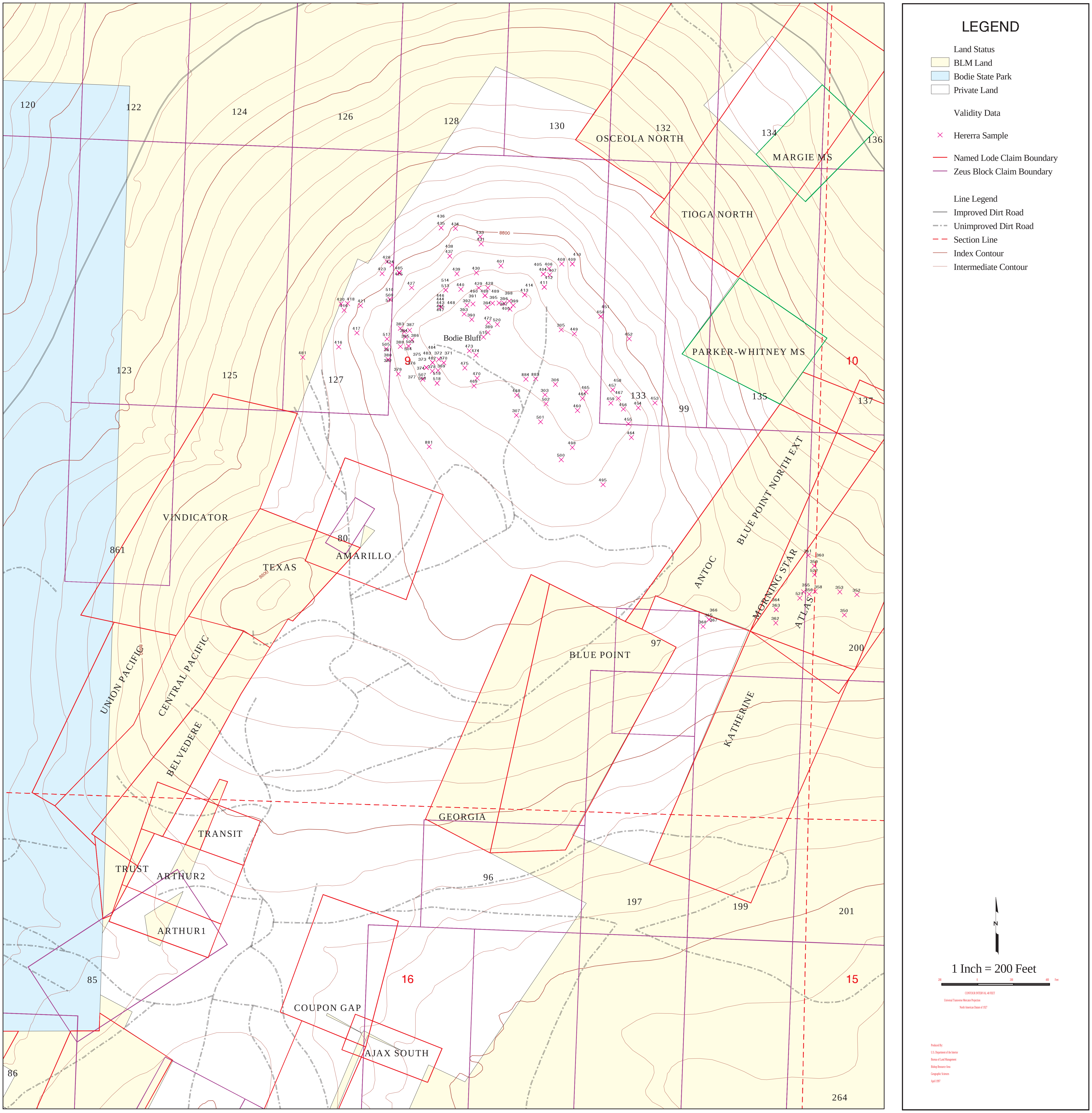
MAP 9 - Surface Disturbances in the Bodie Bowl



MAP 10 - Composite Surface Sample Locations



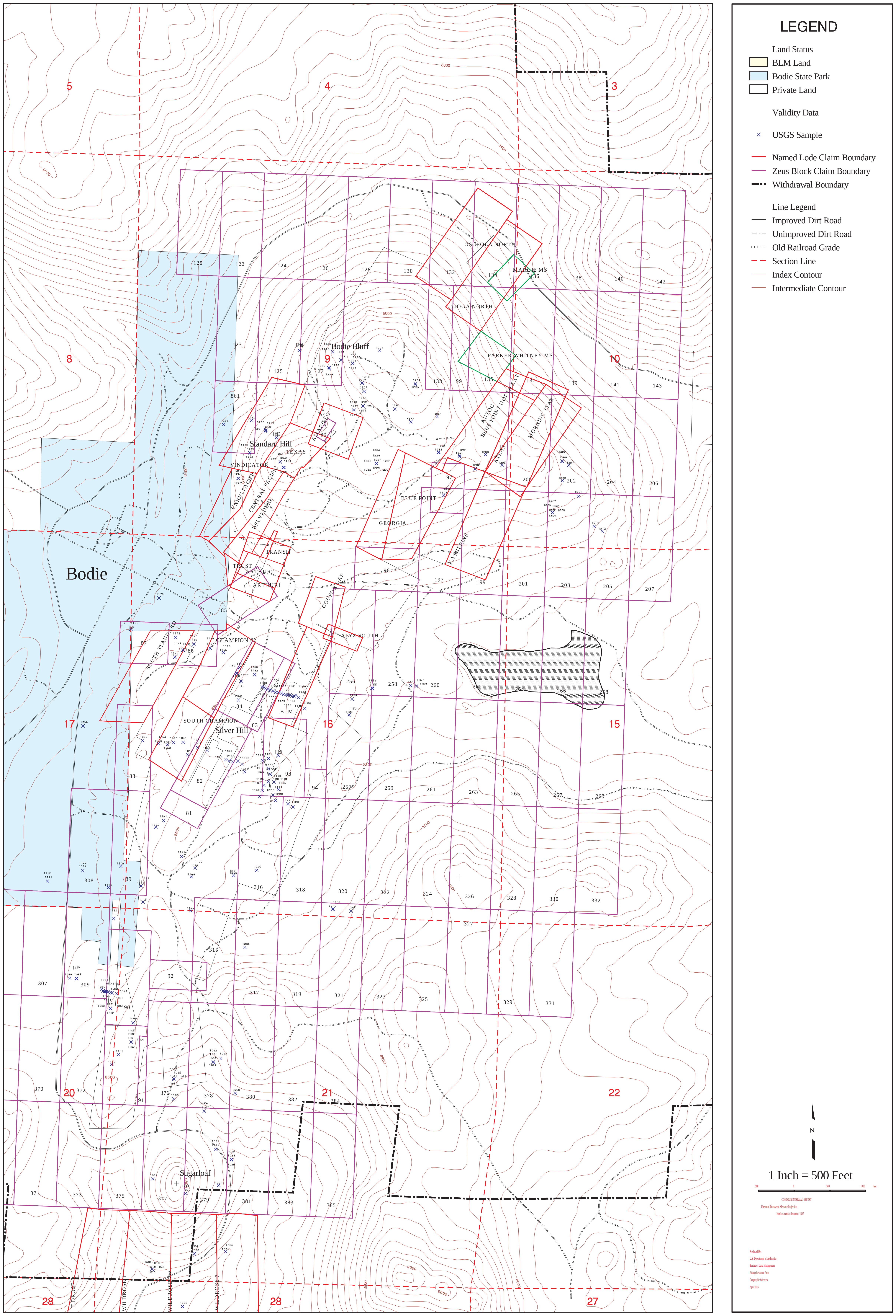
MAP 11 - Hererra Surface Sample Locations



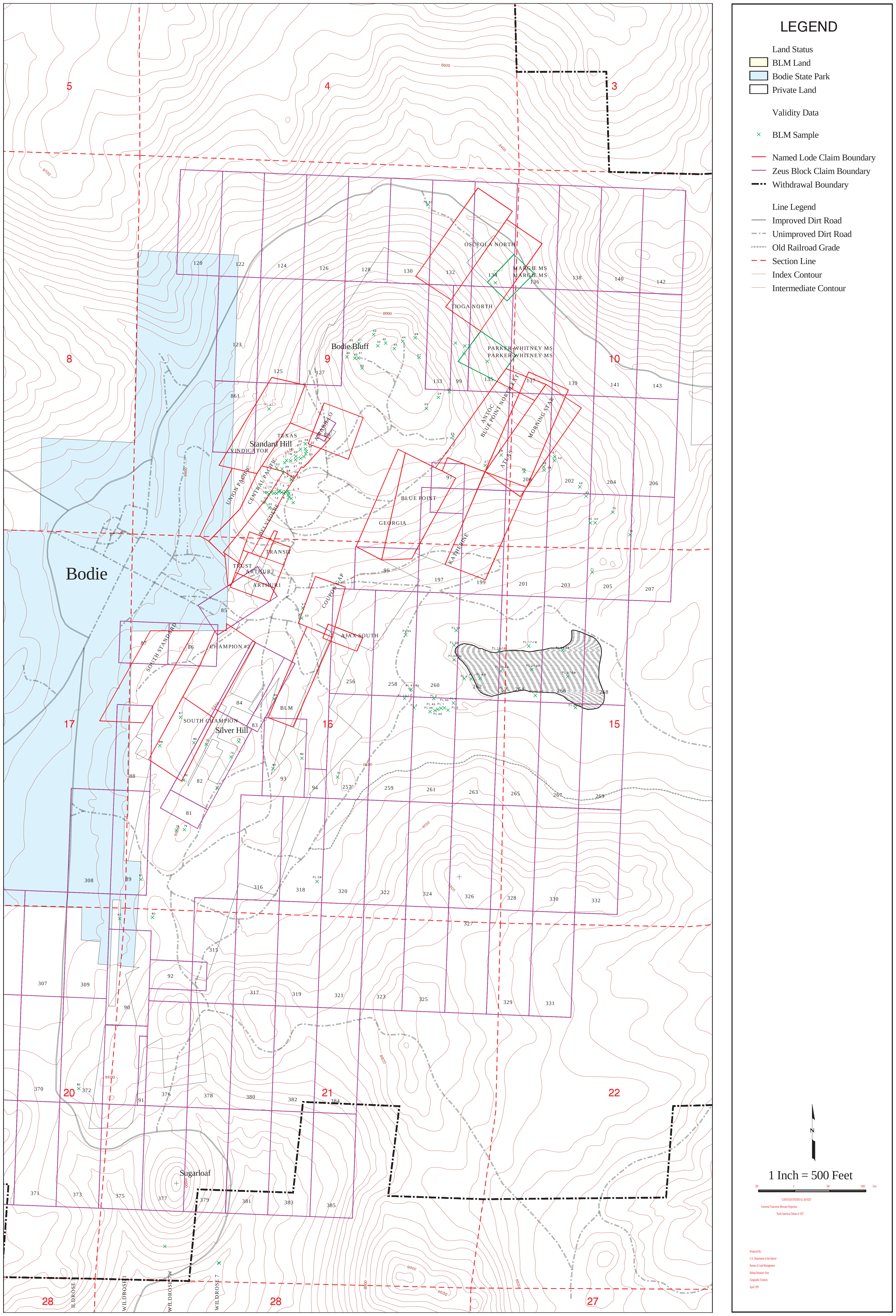
T. 4 N.

R. 27 E.

MAP 12 - USGS Surface Sample Locations



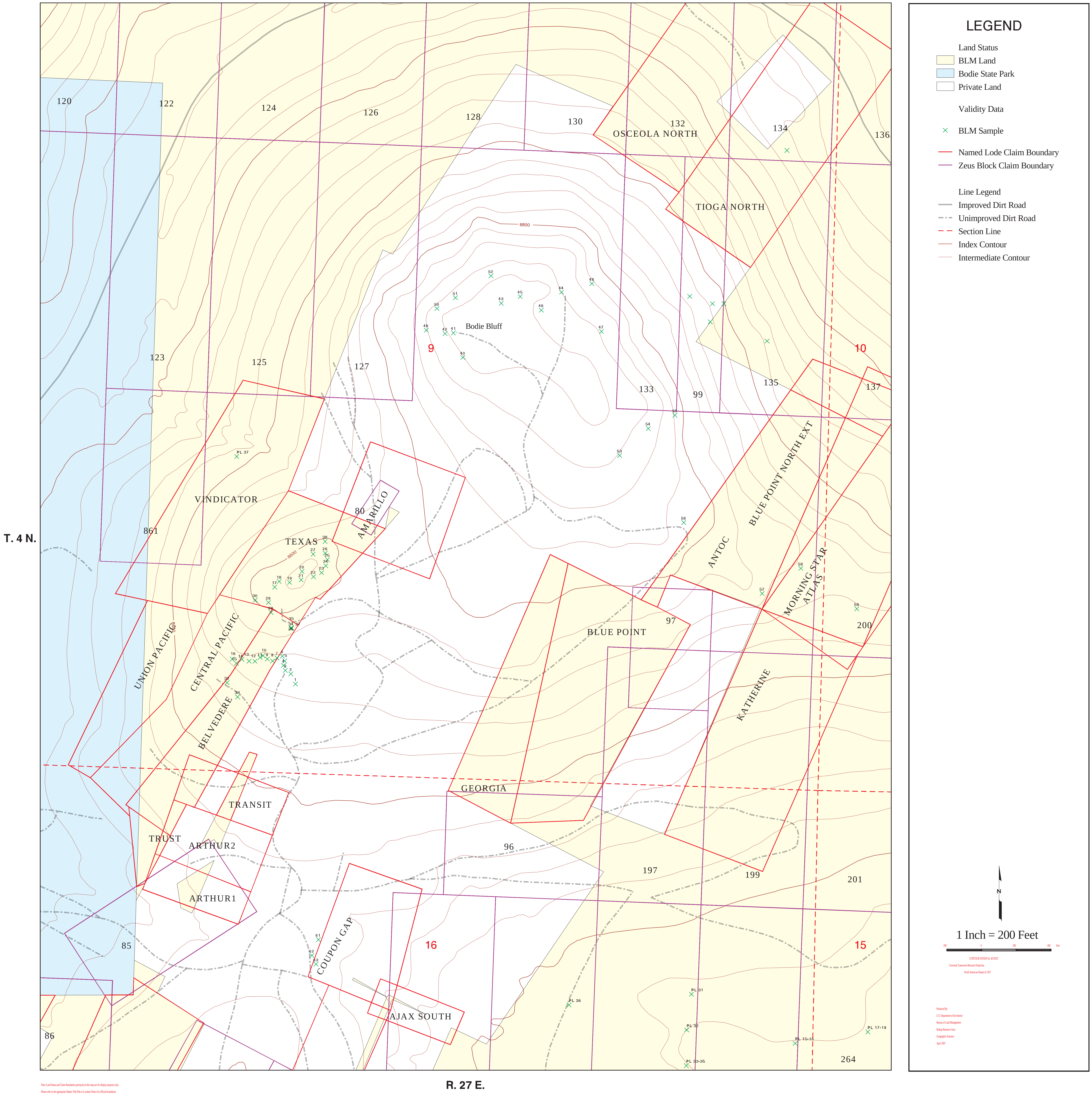
MAP 13a - BLM Surface Sample Locations



T. 4 N.

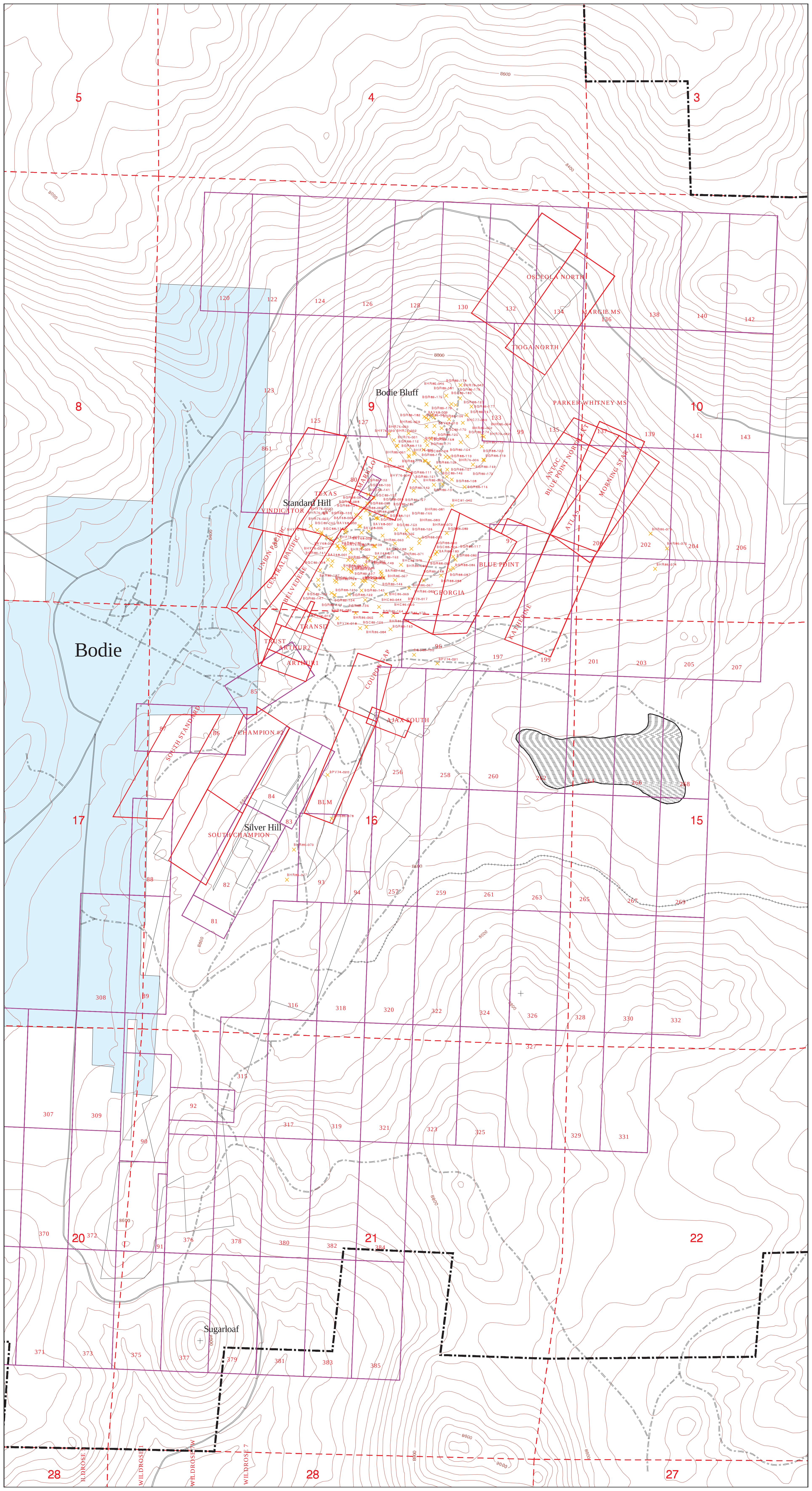
R. 27 E.

MAP 13b - BLM Surface Sample Locations



MAP 14 - Amax-Galactic Drill Hole Collar & Near Surface Sample Locations

T. 4 N.



LEGEND

Land Status
- BLM Land
- Bodie State Park
- Private Land

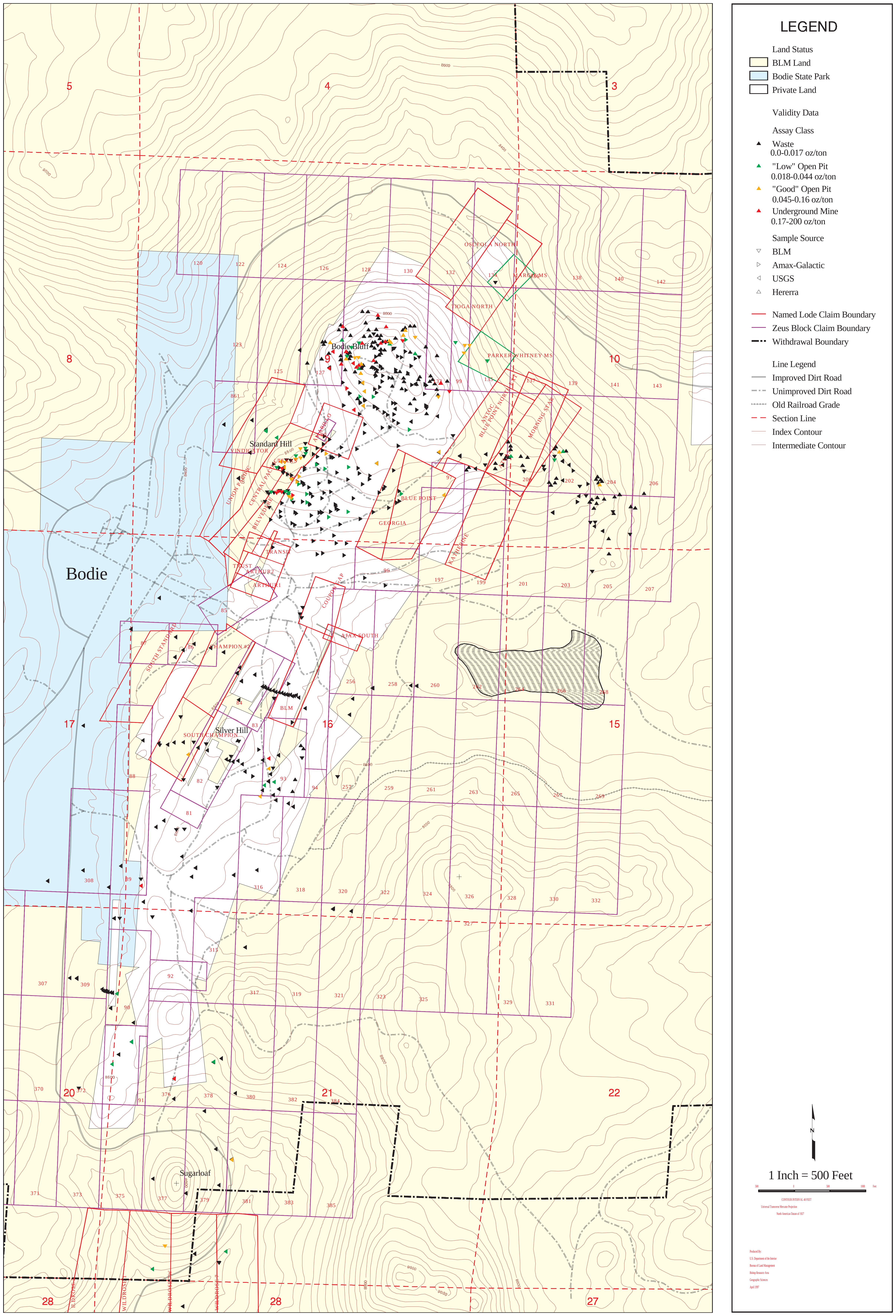
Validity Data
- Amax-Galactic Drill Hole Collar or Near-Surface Sample
- Named Lode Claim Boundary
- Zeus Block Claim Boundary
- Withdrawal Boundary

Line Legend
- Improved Dirt Road
- Unimproved Dirt Road
- Old Railroad Grade
- Section Line
- Index Contour
- Intermediate Contour

1 Inch = 500 Feet

R. 27 E.

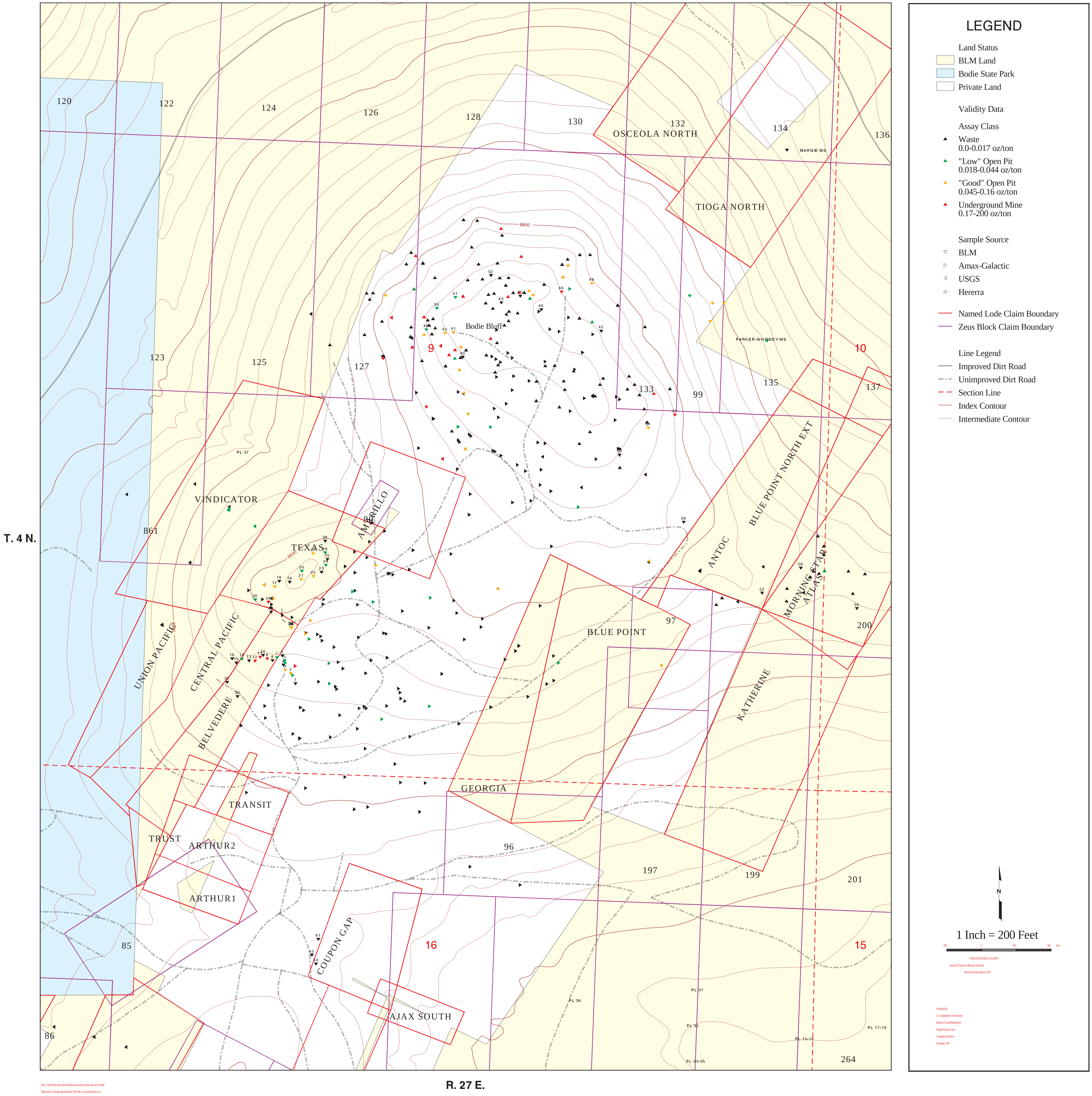
MAP 15a - Composite Gold Surface Assay Values



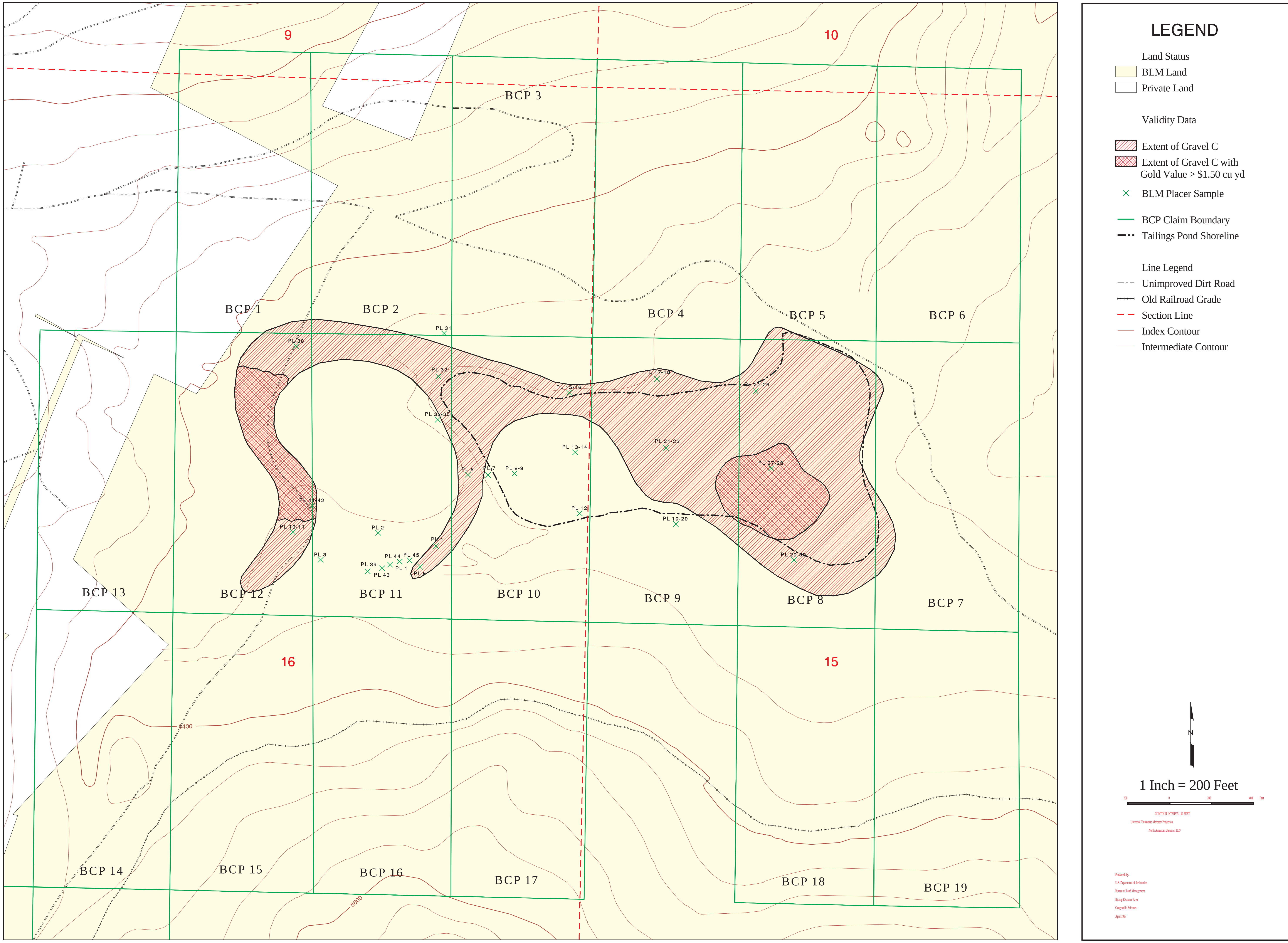
T. 4 N.

R. 27 E.

MAP 15b - Composite Gold Surface Assay Values



MAP 17 - Extent of Gravel C

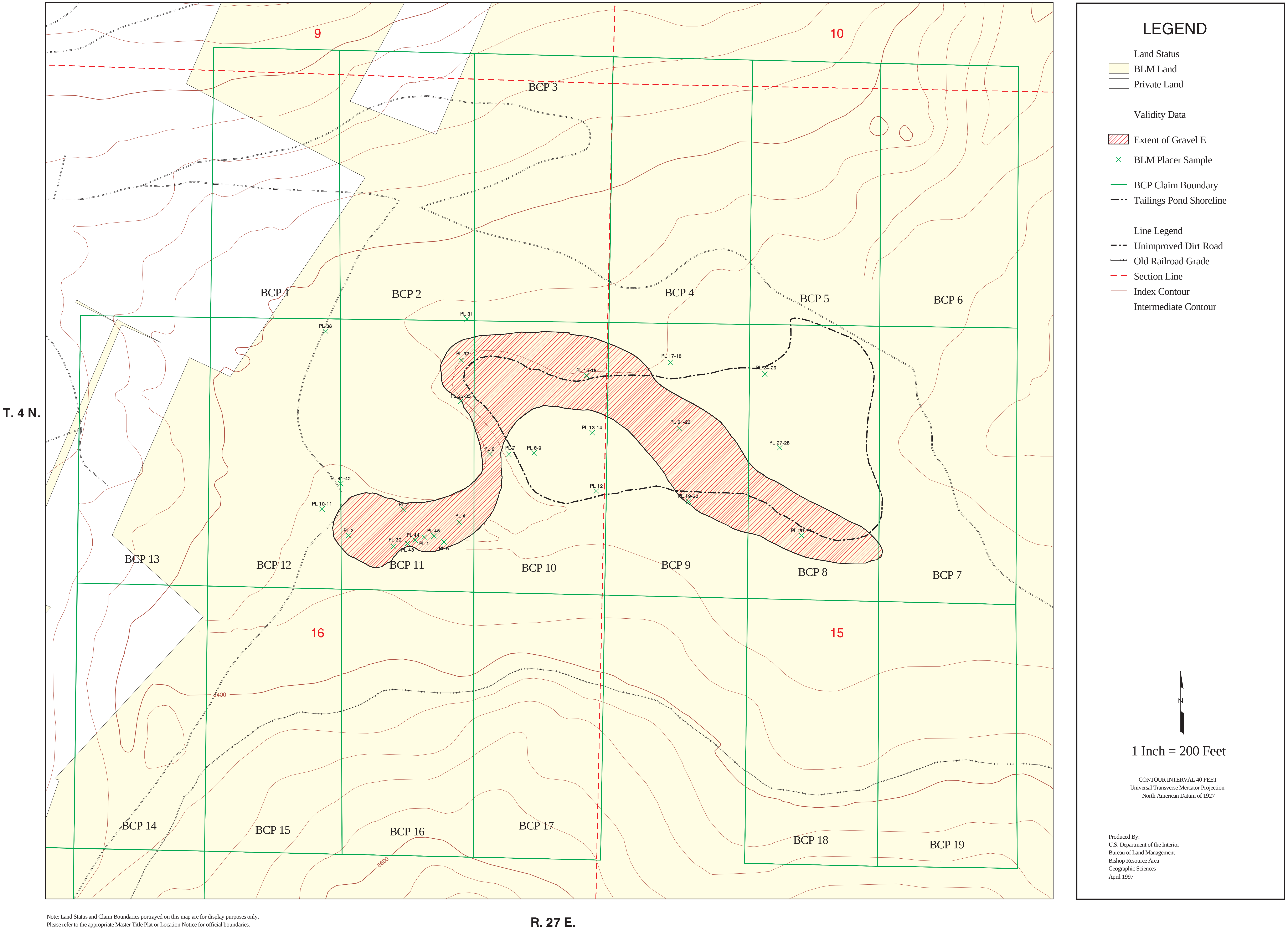


T. 4 N.

R. 27 E.

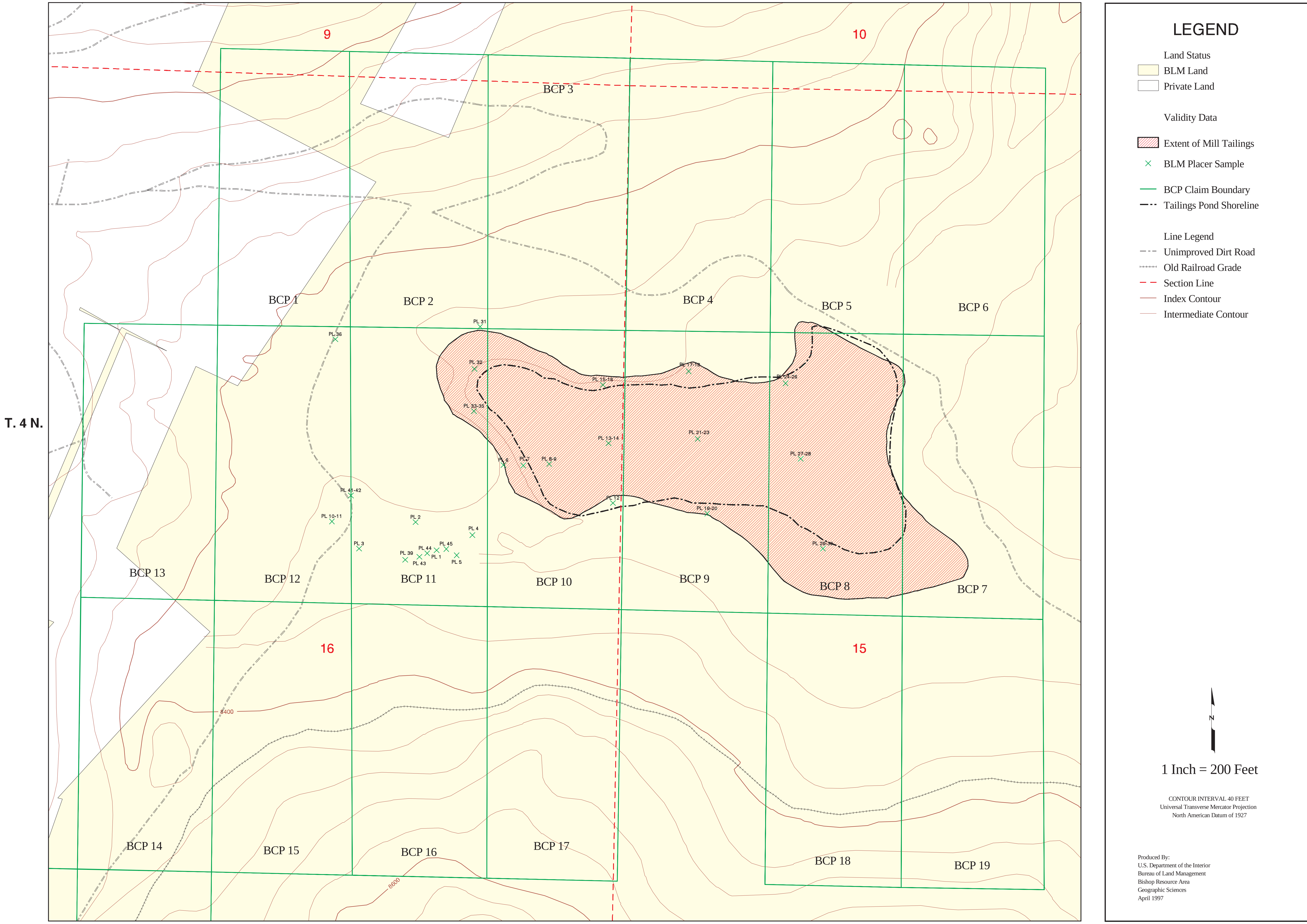
Note: Land Status and Claim Boundaries portrayed on this map are for display purposes only.
Please refer to the appropriate Master Title Plat or Location Notice for official boundaries.

MAP 18 - Extent of Gravel E



Note: Land Status and Claim Boundaries portrayed on this map are for display purposes only.
Please refer to the appropriate Master Title Plat or Location Notice for official boundaries.

MAP 19 - Extent of Mill Tailings



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